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# Investment appraisal in the purchase of a second hand panamax bulk carrier : employment under a contract of affreightment

Domingos da Silva Fortes  
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*Malmö, Sweden*

**INVESTMENT APPRAISAL IN THE  
PURCHASE OF A SECOND HAND  
PANAMAX BULK CARRIER:  
*EMPLOYMENT UNDER A  
CONTRACT OF AFFREIGHTMENT***

*By*

**DOMINGOS DA SILVA FORTES**

*Angola*

A dissertation submitted to the World Maritime University in partial  
fulfillment of the requirements for the award of the degree

**MASTER OF SCIENCE**


*in*

**PORTS AND SHIPPING ADMINISTRATION**

**1993**

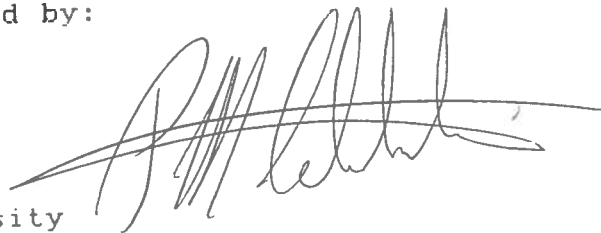
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material is included for which a degree  
has been previously conferred upon me.

The contents of this dissertation reflect my personal  
views and are not necessarily endorsed by the University.

Signature:   
Date: 25th. Oct. 93

Supervised and assessed by:

Patrick M. Alderton  
Course Professor  
World Maritime University



Co-assessed by:

Arne Sandevärn  
Visiting Professor  
and International Shipping Consultant  
World Maritime University



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## ABSTRACT

This study concentrates on a project of investment carried out by the shipping company Angotramp Ltd, a subsidiary company of Angonave-Holding. The project consists of purchasing a Panamax Bulk Carrier through a bank loan with a first preferred mortgage on the same vessel which is supposed to be employed in a long voyage charter.

Therefore, this study examines the weaknesses of the project by conceiving for the purpose, an unprofitable project where in spite of the cash flows being positive along the years of the project, the net present value (NPV) and the internal rate of return (IRR), appoint to its inevitable rejection.

The first chapters provide an overview of the market conditions and essential theory on the elements of Investment Appraisal. Later on, a detailed analysis on the contract of affreightment negotiations is provided. The applicable voyage charter party which binds the Angotramp Ltd to the charterers is also laid out. The last chapters discuss the evaluation of the project.

Finally, I must say that for the purpose of this study, I have assumed the managers of Angotramp Ltd, have limited their cost-benefit analysis to a simple cash flow determination neglecting other factors involved such as NPV and IRR.

I hope this will be of great use for my colleagues in the Angonave Shipping Company.



## ACKNOWLEDGEMENT

I have been studying at the World Maritime University pursuing a degree of Master of Science in Ports and Shipping Administration for two years.

Now, when it has come to an end, I would like to thank the General Secretary of the International Maritime Organization for his approval in allocating special funds from that universal institution to enable me to attend this University.

Special thanks also go to the General Manager of the Angolan Directorate of Merchant Marine and Ports, Mr. Francisco Venancio, for his personal engagement in appointing me without which , this would not be possible.

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## CHAPTER ONE

### INTRODUCTION

The following study, apart from constituting a pre-requisite for the award of a Master Degree represents also a great deal of the author's personal endeavour.

For the completion of this study, the author has used many sources available in the well-furnished library of the World Maritime University, most of them dealing with the ship finance, a field in which the author took advantage to go through in depth.

The author must say also that one of the various reasons which led him to write on investment appraisal, traces back to a few years ago when a friend of him once declared " never carrying out an accurate cost-benefit analysis on his projects since the profitability of same is ensured before hand by the simple determination of its cash flow ".

Nevertheless, this study gives a different opinion.

#### 1.1. Why Investment Appraisal?

It is recognized that banks'prior to financing either newbuildings or second-hand vessels, ask for whether there is a reliable collateral and risk analysis of the project. Bankers want to know about the cash flow which will enable them to appraise whether the investment is profitable or not.

Prof. Costas Gramenos from the University of Wales,

says in his book ( "Bank finance for ship purchase", 1979, p. 32 ):

" Before agreeing an application, the loan officer has to examine the earning capacity of the vessel (s) proposed for finance , any other vessel offered as a collateral and, more likely, other vessels owned by the shipowner. In order to make this examination, which is an integral part of overall credit analysis, the loan officer must know the vessel's income and expenses. More specifically, he has to satisfy himself that a first class charter may be arranged and must appraise accurately the statement of running/voyage expenses".

Thus, the main concern of the company is to work out the cash flow of the investment, in other words, an investment appraisal must be carried out which will enable both, to know about the profitability of the investment so that it can decide or not to take the loan on the one hand, and the lender to know about the viability of same project in order to secure the repayment of his principal and interest, on the other hand.

Investment appraisal is also a decision making tool in the company. It does not only apply to vessels but also to other fixed assets which are expected to produce revenues to the company due to their employment e.g. trucks employed in the inland transportation of containers. Fixed assets such as cars for employees and computers are not included in that scheme.

It does not make any sense to appraise an investment on those fixed assets which do not bring in revenues. This is linked to the fact that the return expected on the money

invested is supposed to be granted by the level of those revenues, thus, a given fixed asset must be worth it.

Investment appraisal in its part dealing with risk analysis enables the company to anticipate measures with a view to eliminate to a certain extent risks rather than incur unnecessary losses. Using investment appraisal by applying correct techniques and methods of a project's evaluation, the decision makers are fully aware of the rate of return they expect on their investment. This is provided by the Internal Rate of Return techniques.

Another view of the issue is that despite the fact banks in recent years have become cash flow oriented, the cash flow of the project as a future value is not enough to appraise an investment due to the inflation factor. Prof. Gramenos again says in his above referred book, page 36:

"On the other hand, other factors such as inflation... May jeopardize regular service of debt."

It results then, the cash flow as an expected income must be turned into present values through a discount factor which includes the expected inflation rate. This is also provided by the investment appraisal.

Finally, investment appraisal is the only way which enables all decision makers to judge positively or negatively with a certain degree of authority about any given investment project whether a large or a small one.



## 1.2. Why a Contract of Affreightment ( C.O.A.) ?

Financing of newbuildings and second-hand vessels is becoming more and more difficult these days because banks are so reluctantly regarding that especially when dealing with developing countries. It appears there is no way out for the potential shipowner who wants to get involved in this international industry. How can he obtain finance for purchasing a vessel when the banks and other financial institutions are so adverse by requesting more and more reliable securities in order to secure full repayments of their money invested? A possible way out could be purchasing a vessel either from raised funds or from local recruitments of funds in other words, to recruit potential shareholders in a wealthy market.

This latter practice is becoming successful especially in markets such as Germany where a segment of the german population comprises mostly lawyers and physicians who are investing their money in an investment company called "NVA".

Going back to the point, considering all the facts that have been mentioned so far, the best solution for the potential shipowner is to arrange a C.O.A. because, in this way, he is able to secure full repayment of the loan to the bank. It is obvious that by doing so, the shipowner faces some risks regarding continuation of full employment of the vessel .

Therefore, the shipowner's main concern should be related to the fixture with a first class charterer in order to secure the continuance of a C.O.A. and consequently, repay the debt:

"A first class charterer may be broadly defined as one

who has a long and esteemed record in the industry and is therefore, a "name" company, and/or is a company with a substantial assets which are readily available for the protection of the shipowner in the event of default". (Prof. Dr. Costas Th. Gramenos, 1979, University of Wales, "Bank finance for ship purchase" p. 34).

The decision of purchasing a panamax second-hand vessel is related to the following reasons:

Firstly, a second-hand vessel because it offers some advantages e.g.:

"The vessel is bought at a fixed price, while a new construction may entail acceptance of a variable purchase price owing to the defensive policy employed by the shipyards against inflation; the vessel is ready immediately after conclusion of the sale.

Further, it must be stressed that timing is of paramount importance for the purchase of a second-hand vessel.

Buying during a boom period will be a disaster if followed by a fall in prices. For instance, a purchase in the tanker market in the boom period of 1973 could have been disastrous if it had not been followed by a profitable time-charter of long duration"... (Prof. Dr. Costas Gramenos, 1979, nr. 16 in "Bank finance for ship purchase", p. 10).

Secondly, a Panamax vessel because of the need to take advantage of economies of scale taking into account the long distance between the two ports (Fremantle and Luanda) and the possibility of a ballast leg from Luanda to Fremantle.

Moreover, in line with the economies of scale, a Capesize bulk carrier could be purchased if there were no restrictions in the Luanda Port including the depth of the harbour and the length of the quay as well.

Finally, it appears that the Contract of Affreightment constitutes the best solution for a potential investor who is willing to become a shipowner, to start with the business because of a secure employment of the vessel which enables him to repay the loan or the capital costs.

## CHAPTER TWO

### ANGOLA: THE TERRITORY AND ITS MARKET REGARDING SHIPPING

#### 2.1- GEOGRAPHICAL AND ECONOMICAL FEATURES

##### General situation:

The Republic of Angola is located in the west of southern Africa between latitudes 4°22 and 18°02 south, longitudes 11°41 and 24°05 east. The area of the territory is 1,246,700 square kilometers, with a sea coast 1,650 km long and a land frontier 4,837 km long.

The neighboring countries are, to the north, Congo and Zaire; to the east, the Republic of Zambia and the Republic of Zaire and to the south, Namibia. The maximum north/south length of the territory is 1,277 km and the maximum width from west to east is 1,236 km.

The population is about 8 million.

##### Natural resources:

Forests: Angola possesses great forests concentrated particularly in the province of Cabinda. Wood of great value grows in the forest of Maiombe, such as black wood,





**Angola**

ebony, African sandle or iron wood.

Fishing: the coast of Angola extends over 1650 km on part of the Atlantic coast line that is rich in fish, shellfish and crustaceans of all sorts.

Water: the rivers afford immense facilities for hydraulic power generation and it is believed that, for example, exploitation of the Kwanza would allow generation of 30 billion kilowatts per year.

Mines: Angola is a country with considerable subsoil resources and other economic potentials such as oil, iron, manganese, copper or rare ores in addition to marble quarries. The principal oil fields being exploited lie near to the coast, in the northern province of Cabinda and Zaire. The diamond deposits to the north of Lunda are believed to be the biggest in the world. Iron ore is abundant in many regions

( Source: " Angola: National Reconstruction ", DIP/MPLA, 1985, Berger-Levrault, Paris " ).

## 2.2. MARKET CONSIDERATIONS

### 2.2.1. At National Level

It goes without saying that Angola as a country devastated by war, provides great investment opportunities mainly for the shipping industry. This is fully justified by the length of the coast which is about 1650 km and the existing inland waters, provided by the rivers Kwanza in the central north and Cunene in the southern.

Moreover, due to her strategic location Angola could organize inland transport for the cargoes destined to countries such as Zambia, Zaire and north of Namibia through Lobito and Mocamedes ports, respectively.

Angola was and still is facing a civil war which has severely destroyed towns, agricultural infrastructures and led to paralization of most small and medium size manufacturing industries. Therefore, the country must be rebuilt in a peaceful era. Thus, many investors representing big concerns will arise taking advantage of Angola's agricultural and mineral resources (Vide description about Angola).

Despite her agricultural potentialities, the truth is that Angola will not be able to feed her population at least for the first ten years of the post-war period without being import-oriented essentially in grain imports e.g. maize, wheat, rice, etc.

Wheat will have to be imported even over a period above that, to meet the growing population's needs.

This will enable, therefore, shipping companies to adopt strategies in order to adjust themselves to new market requirements by arranging contract of affreightments with domestic shippers for transporting shipments ordered by them.

Angonave appears at this point.

Nevertheless, it can not operate as a state-owned company out of its pre-established routes as it has been conceived for rendering liner services.

This is the reason by which Angonave must create a new subsidiary company in order to penetrate new markets as a result of shippers's internal demands for external products.

It is known that the shipper in the tramp business has the choice of ports taking into account the favorable level of prices prevailing in the markets whose goods are intended to be purchased by them. So , at a national level regarding the above considerations, there are good investment opportunities for all investors especially for the shipowners. Another side of the issue lies on the existing vessels's tonnage, obviously at national level.

Angola has three shipping companies: Angonave, Secil Maritima and Cabotang. The former owns six multipurpose ships with roughly 14000 dwt each whilst the second has roughly four ships with 6000 dwt each. The latter is devoted to the carriage of passengers and to coastal trade services ( feeders ).

Thus, one may conclude that the total tonnage referred to above is not sufficient to meet shipper's growing demands for import products. An overinvestment, therefore, made by the shipping companies in the acquisition of a new tonnage, would not be unwise, risky or unprofitable. On the contrary, that would be a very profitable investment for shipping companies and for the bankers since the latter are there to finance the former.

#### 2.2.2. At International Level

If, on the one hand, the national market is import-oriented due to war devastation and subject to analysis of the existing tonnage capacity owned by national shipowners,



on the other hand, the international market should be subject to freight level of grain commodities and world demand for dry bulk carrier supply services analysis for project purposes.

The table below shows the forecast of freight rates to 1996 for bulk carriers 50/80,000 dwt and its index development:

	Spot Market	Time Chart. Market
1990	100	100
1991	95	98
1992	115	120
1993	132	130
1994	120	110
1995	110	112
1996	115	115

Source: Ocean Shipping Consultants, in " Freight Rates and Shipping Costs to 1996: Bulk Carrier and tanker profitability analysis ", 1991.

It can be seen how a forecast shows the increase of freight rates from 1994 to 1996, which makes one believe a reduction in the number of total tonnage for this market on the one hand, and an increase of demand for dry bulk transportation, on the other hand.

Figure 1 shows the average spot rates of typical dry bulk trades. The maximum freight rate fluctuates between 30 and 35 USD with a tendency for a short decrease. However, for the purpose of this project, the figures in reference

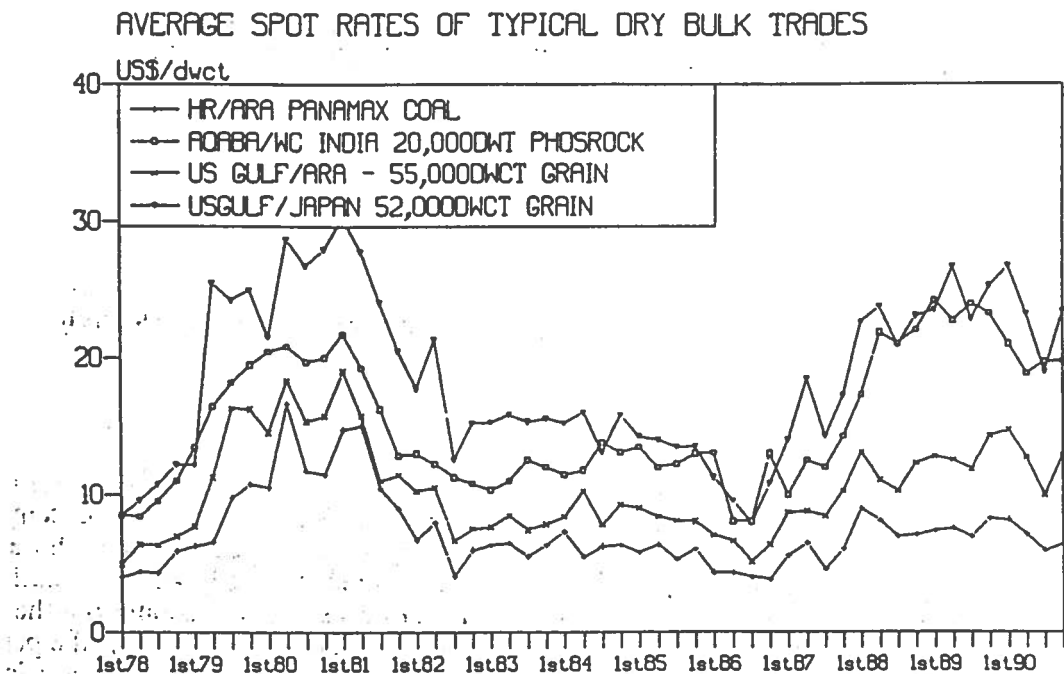


Fig. 1 : Average Spot Rates of dry bulk cargoes

Source: Ocean Shipping Consultants in "Freight Rates and Shipping Costs to 1996: Bulk Carrier and tanker profitability analysis", 1991.

serve only as a guidance for freight negotiations between the owner and the shipper under C.O.A.

For freight rate fixture in a C.O.A., both parties could agree to adopt a freight rate within the range of a given freight market level by inserting an escalation clause to protect the shipowner from any possible variations on the cost items e.g. bunkers and crew wages.

Therefore, the freight fixture under C.O.A. must be cost-oriented rather than market-oriented as it is the case in the spot market because this is the best way to safeguard shipowner's interest as the market is so volatile!

Table 1 shows the forecast grain trade and shipping demand development to 1996.

As can be seen the tendency of volume to be traded as well as the demand for shipping services is increasingly growing.

"In the period to 1996 forecasts indicate that the grain market will continue to be in a general situation of oversupply, with continued high volume output in both the EEC and the US for largely political reasons.

It is unlikely that any far reaching alterations of the EEC's common agricultural policy will be noted before the end of the study period." (Ocean Shipping Consultants, 1991, pag. 112)

	Trade volume	Av. Haul	Ship. Demand
	( mil. tonnes )	( n miles )	(bil. ton. miles)
1991	200.0	5600	1120.0
1992	205.2	5600	1149.1
1993	210.6	5610	1181.5
1994	218.2	5625	1227.4
1995	221.4	5630	1246.5
1996	227.5	5635	1282.0

Table 1- Forecast grain trade and shipping demand development to 1996.

Source: Ocean Shipping Consultants, " Freight Rates and Shipping Costs to 1996: Bulk Carrier and tanker profitability analysis ", 1991.

Thus, the existing national tonnage is not so meaningful in order to give an appropriate response to the increasingly growing international demand for grain commodities. In other words, there is a non-overtonnaging situation from the supplier's side and a very high demand from the shipper's side.

Finally, this explains how international market conditions related to grain trades favour greatly any additional investment in the sector. Therefore, purchase of a second hand bulk carrier, the Marisol, for grain transportation is fully justified from a business point of view.

----- o -----

Summary:

The aim of this chapter has been to give to the reader, an idea about Angola, her location as well as her economic resources in order to allow a correct judgement on them vis-a-vis the country's engagement in the worldwide shipping industry.

The abundant raw materials including those which are part of the major dry bulk commodities e.g. coal, iron ore, and liquid bulk commodities e.g. oil and gas, are sufficient to influence the trade pattern in that particular African region.

Moreover, the basics of an investment appraisal lies in the market's knowledge wherein the investment is going to take place considering that there is no investment without a market as the latter provides all essential trade indicators to a project e.g. freight rates, size of internal supply and demand for commodities, interest rates and so on.

## CHAPTER THREE

### THE TIME VALUE OF MONEY

#### 3.1. General

Whatever the project is, it is wise to consider the time value of money regarding several factors such as inflation, devaluation and others which may strongly influence the investment. Without previous and careful consideration of the above factors, the investment runs the risk of not achieving the intended purpose or objective.

Therefore, the value of money assumes considerable importance since the goods and production factors may be subject to inflation. This fact, naturally, affects the freight level which inevitably results in a decrease of revenues; and consequently in losses.

It is not an easy matter to forecast inflation but it does not exclude the possibility to estimate it. In this regard a conscious planner should rely on statistics which are periodically published by the National Institute of Statistics as well as other market reports. Although in possession of valuable information, this is not sufficient to precisely forecast the evolution of inflation within the incoming years of the project. So, it is necessary to make assumptions by using statistical methods such as trend analysis among others.

Trend analysis as a dynamic indicator shows how much a given variable will change through the years if it is assumed that the circumstances in which it operates will not change provided that it keeps the same growth tendency.

As an illustration of this, if it is expected the price of diesel will increase ten per cent in the year two, the assumption is that under normal circumstances the price of diesel in the third year will be increased by twenty per cent as it keeps its growth tendency. Perhaps the market situation will change so that can be stated a decrease on the price of diesel in the coming years, but if so it does not matter to the project because it will to some extent result positively due to the reduction on costs which maximize the revenue.

Whatever is the case, the best a project planner can do is to bear in mind that prices whether dramatically or not always change for bad or for good. All the planner should do is to project current prices with an upward trend rather than downward price trends. A project with constant prices is not a good solution because it seems to be unreal, essentially, when considering changes on the producing factors.

### 3.2. Simple Interest, Compound Interest, Discount factor

If the capital deposited by someone at the year 1 is equal to the amount he gets from the bank at the end of year  $n > 1$  after its capitalization, then it is a simple interest. In other words, there is no cost of capital on the deposited amount.

The principal remains as a principal.

Compound interest, also known as interest on interest, reflects the increase of an initial deposit also called as principal due to payment by the bank or other financial institution of certain interest on that amount of money through a given time. Therefore, the compound interest means a future value one is supposed to get at the end of a time previously agreed.

The formula for calculating the compound interest is the following:

$$(1) \quad F_n = K(1+i)^n \quad \text{Source: (M. Thomsett, 1989, "The Mathematics of Investing", p. 10).} \quad o$$

$$\text{for } n=0 \quad F_0 = K(1+i) = K$$

$$\begin{array}{ccc} & & 1 \\ n=1 & F_1 = K(1+i) & = K(1+i) \end{array}$$

$$\dots \quad \dots \quad \dots$$

$$\begin{array}{ccc} & & 10 \quad 10 \\ n=10 & F_{10} = K(1+i) & = K(1+i) \end{array}$$

where:

$n$  = the number of years

$F_n$  = the future value to be received at the end of year  $n$

$K$  = the amount of money deposited at the beginning of year  $n$

$i$  = the rate of interest on the deposited amount.

$n$

$(1+i)$  = the compound factor



In the compound interest, one is dealing with a certain amount of money ( principal) which will be increased after a period of time has been occurred. In other words, the value of 1USD (American dollars) in the future will not be the same as today. In the future it will be 1USD and something else. As an illustration of this, by applying the formula (1) one gets:

number of years = 1  
principal= 1 usd  
interest rate= 8%

then,

$$F_1 = 1(1.08) = 1.08 \text{ usd.}$$

The principal of one US dollar has increased from one to 1.08 USD due to payment of interest on it. Now the time value of money will not be seen in the future but at the present.

The question is: how much is one dollar worth today which is supposed to be collected in the future? Once the desirable answer is given the discount factor will be dealt with.

The discount factor is the inversion of the compound factor. It is the inverse because the time value of money is not connected to the future but to the present stage. Therefore, the question is made in order to know how much one dollar is worth today which one is supposed to get in the future. The example given below represents the formula for calculating the compound interest:

$$\text{from (1) } F_n = K(1+i)^n$$

The formula in (1) is designed to find the value of one dollar which is deposited or invested today, in the future. If the above formula is inverted it will look like this:

$$(2) \quad K = F_n(1/(1+i)^n)$$

where

$n$  = number of years

$k$  = the value of money today

$i$  = the discount rate of the investment

$f_n$  = the amount of money to be collected in the future.

The ratio  $1/(1+i)^n$  is called discount factor. This is as can be seen, the inversion of the compound factor.

$$(1+i)^{-n} = 1/(1+i)^n$$

### 3.3. Rate of Discount, Interest rate and Opportunity Cost

Discount rate is the rate which is discounted on the investment. It applies to the future amount of capital with a view to obtaining a present value. This present value will be a value discounted at a certain rate.

Moreover, the initial amount of investment will be absorbed through the years by the inflation. Being so, the amount of capital investment will be reduced to a less value under influence of deprecating factors so that in order to know the real present value of the amount of capital invested at the beginning of year zero, this same amount should be discounted at a given previously established rate over the

project. That is the discount rate.

### Interest Rate

Interest rate is a fixed percentage applied to the amount of an initial investment. This percentage is calculated monthly, quarterly and annually and has as a result an increase of the principal. Most investors used to adopt the interest rate designed for long term deposits as a discount rate for their proposed investment project.

### Opportunity Cost

Opportunity cost is , simply, the money gained if an investment opportunity is lost.

This means that a given investment opportunity may have an alternative one. For an investor who possesses a certain sum of capital instead of investing it by putting his money in his bank account designed for a long term deposit which gives him in return within a couple of years a certain interest, the referred investor could invest the same money whether by buying a house and selling it or purchasing a fixed asset which gives him higher profits during its exploration.

So, the question may be made in this way: how much did the investor loose by gaining a new opportunity? Or even, how much did the investor gain by loosing that opportunity? It is a common approach that all investments carry costs. What is then, the attitude an investor should adopt regarding that costs? What would his opportunity costs be? What would his benefit be?

His opportunity cost will, therefore, be determined by a

rate. This rate can be either interest rate, discount rate or cost of capital on a given investment.

Most economists agree that there is not difference between opportunity cost, discount rate, interest rate and cost of capital.

" After all, if a company could raise money at one rate and invest it risky free elsewhere, in a bank say, at a higher rate, then the opportunity cost of project capital is simply the higher rate! " ( Dr. R.H. Mole, "Basic Investment Appraisal", pag.73, 1985)

#### 3.4. Real and Nominal Interest

No country can avoid inflation affecting her economy to some extent . Therefore, inflation is a phenomenon which is beyond a particular economy's will since it is opened worldwide in trading exchanges.

Moreover, an increase in the oil price or in raw materials import prices will considerably affect a national economy by increasing local production factor costs. Inflation appears, therefore, as an increase in the current price level of goods as a result of an increase in the production inputs. Bearing that in mind, inflation will affect the value of money over a certain period.

An example is given in the following:

An investor wants to make a deposit of 160 USD at an interest rate of 9 per cent over 5 years. How much will he get at the end of 5 years if he expects an inflation rate of 8 per cent per annum?

If the formula for calculating compound interest is

followed, the result will be:

$$\begin{aligned}
 & \quad \quad \quad n \\
 & \quad \quad \quad F_n = K(1+i) \\
 (1) \quad & \quad \quad \quad 5 \\
 & \quad \quad \quad F_5 = 160(1+0.09) \\
 & \quad \quad \quad F_5 = 160 \times 1.54 = 246.4 \text{ USD}
 \end{aligned}$$

This means that at the end of the fifth year, the investor will have 246.4 USD. But the investor gets that amount if the economical conditions do not change over the five years which is not so likely if there is no inflation. Therefore, that amount of 246.4 USD will be reduced. Assuming there will be an inflation rate of 8 per cent annually as the case study presents. Then the formula applied is:

$$\begin{aligned}
 & \quad \quad \quad n \\
 & \quad \quad \quad F_n = K(1+i/1+I) \\
 (2) \quad & \quad \quad \quad 5 \\
 & \quad \quad \quad F_5 = 160(1+0.09/1+0.08)
 \end{aligned}$$

then,

$$F_5 = 160 \times 1.047 = 167.52 \text{ usd}$$

As can be seen, this time the investor will only receive 167.52 USD. In other words, he will receive nominally 246.4 usd as before but the real market value of that money will be only 167.52 USD taking into account the inflation of 8 per cent. That means inflation reduces the value of money.

That is the reason why one has to consider the real and nominal interest. As can be seen in the example above, the

followed, the result will be:

$$\begin{aligned}
 & \quad \quad \quad n \\
 & \quad \quad \quad F_n = K(1+i) \\
 (1) \quad & \quad \quad \quad 5 \\
 & \quad \quad \quad F_5 = 160(1+0.09) \\
 & \quad \quad \quad F_5 = 160 \times 1.54 = 246.4 \text{ USD}
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rate( $i$ ) is called the nominal or monetary rate. If one wants to know the real rate, he has to calculate it by applying the following formula:

$$R = (1+i/1+I) - 1$$
 (Source: Dr. R. O. Goss, Hand-out "Assessing Investment in Shipping", p. 205, WMU).

where

$R$  = Real interest rate or net interest rate after the inflation

$i$  = Nominal interest rate or monetary rate

$I$  = Inflation rate

Finally, the ratio  $(1+i/1+I) - 1$  is designed to correct the interest rate affected by inflation.

## CHAPTER FOUR

### ELEMENTS OF INVESTMENT APPRAISAL

#### 4.1. Investment Criteria: the Payback Period and the Rate of Return

The payback period constitutes one of the various investment criteria for many investors despite the weaknesses it evidences in projects analysis.

The Payback period does not take into account various factors regarding the time value of money such as inflation. It starts from simple assumptions made by the investors willing to recover their money as soon as possible. They rely their calculations on the assumptions that if in the future they annually get a certain profit and that is evenly distributed over the project under the same circumstances as today, nothing is going to happen. They should, therefore, have their initial investment recovered within  $n$  years.

Therefore, the payback period is the number of years within which the total amount of assumed annual cash flows equals the original investment. For example, a company wants to invest in a project worth a million dollars. The company assumes treasury's back flows of four hundred thousand dollars evenly distributed along the project. The pay back period will be then, calculated by using the following formula:



( 1)      Original Investment  
-----  
Average annual cash flows

According to the above formula one gets:

$$\frac{1000000}{400000} = 2.5 \text{ years}$$

That is to say that somewhere between the second and third year of the project the capital investment will be fully recovered.

If inverting the ratio in (1), the rate of return for that project is:

$$\frac{400000}{1000000} = 0.4 \times 100 = 40\%$$

The rate of return is 40 per cent for the proposed project. According to the author's personal views, this investment criteria works only if applied to small and medium size enterprises and under the condition of a very stable currency prevailing in the market wherein the project is being carried out.

That is the reason why the payback period is considered to be a relative measure of project evaluation.

#### 4.2. The Cash Flow

Cash flow is the money which is collected at the end of a business year by a company or any institutions which provide goods or services to a given number of clients or customers as a result of a business activity.

It is agreed that once an investment is made and started off, it carries costs during its economical activity. Therefore, the revenue or income that is expressed by multiplying the price of goods or services by the quantity of the goods sold is deducted by costs incurred during the production process.

So, the net result added to depreciation amounts to the cash flow which is also known as net working capital. As is shown below the steps that should be taken to determine the cash flow are:

	1.Revenue(pricexgoods)
plus	2.Revenue on deposit account
"	3.Outstanding revenue
less	4.Operating and general expenditure
equal	5.Income before depreciation
less	6.Depreciation
equal	7.Income after depreciation and before interest.
less	8.Interest
equal	9.Income before corporation tax
less	10.Corporation tax
equal	11.Income after corporation tax
less	12.Dividend to preferential accionists(if any)
equal	13.Profit or net income

Because of depreciation, the amount of money written off the value of the fixed assets, is only a concept which means that

it does not represent a cash- out but a cash- in with a view to replacing the fixed assets at the end of their useful life. It must be added to the net income or profit stated at the end of every year. Thus, the cash flow will be:

$$\text{Net income} + \text{Depreciation} = \text{Cash flow}$$

This, indeed, tells one about the need to subtract depreciation and to add it again in order to avoid its inclusion in the other costs of the company.

#### ELEMENTS WHICH LEAD TO CASH FLOW DETERMINATION

##### 1. The Revenue

There is no any difference between revenue and income since income also means all cash during a certain period of economical activity. The difference between revenue and cash flow is that the former is an amount not deducted from costs.

Thus, the concept of gross revenue or gross income. The latter (cash flow) is the profit or net result of an economic activity performed during a certain period of time. Profit or net result can also be treated as net revenue or net income which means that they are exempted from any deduction of costs once they have been previously made. The basis of calculating revenue or income is the price of goods times the quantity of goods sold.

In the shipping company the price of goods is the freight rate. As the shipping company does not sell goods but transportation services to the costumers, mainly shippers, the freight is not multiplied by the services rendered to a given client. Because services can hardly be measured, a freight rate has been convened, whether provided by conference tables or resulted from an agreement between the

shipping company and shippers for a specific type of goods to be handled or carried in the ship.

Therefore, the freight rate is multiplied by the quantity of goods not sold but handled or carried in the vessel.

## 2. Revenue on Deposit Account

This type of revenue does not flee the general concept of the revenue. It relates to the amount deducted from the result of cash of the previous economical year at a percentage equivalent to the interest rate established by the lenders which is cumulative along the years of the project.

"The revenue on deposit account may be positive or negative according to surplus or lack of cash". (Dr. G. Williems, H and-book, Le Havre.)

## 3. Outstanding Revenue

This is the amount of money which the company is supposed to collect as a result of sale of a fixed asset whether somewhere along the project or at its end.

Usually, the fixed asset involved is sold at the end of the project. For example the sale of a ship by her owners taking advantage of the favorable market conditions.

## 4. General Expenditure

This relates to administrative costs, fixed costs of the vessel and voyage costs.

5. Depreciation is by definition writing off the value of a fixed asset during the useful time of the project.

According to the company's policy, depreciation related

to a vessel can be an accelerated or a straight line method. Accelerated depreciation happens when the percentage at which the value of the vessel is reduced at the end of the year and does not equal the years of the project. That means that if the useful life of the project is determined for five years , the depreciation will be completed before that deadline.

The straight line method is that by which the value of the asset is divided by the number of years of the useful life of the project which is translated into an annual equity. "In most countries depreciation is provided according to the law, within certain limits, and specific methods depending on the category of activity of the firm. The depreciation is subtracted from the original cost of the asset on the balance sheet. The most commonly used methods for providing depreciation are:

1. Straight Line Method
2. Reducing Balance Method

Knowing the original cost of the asset and estimating the anticipated duration of life of the asset, the scrap value of the asset, the depreciation is calculated as follows:

"

Original Value - Scrap Value

-----

Life of Asset

( Prof. Pierre Houssin,"Principles of Management",World Maritime University)

In this project the straight line method will be used according to the law of the country assumed which is stated in the policy of the company.

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#### 6. Corporation Tax

According to the law of the country a certain amount must be remunerated to the financial organs depending on the Ministry of Finance. That amount is subtracted from the gross profit along the year which has a cumulative character. For purpose of this project 50 per cent of the tax will be designed for remuneration to the fiscal organs.

#### 7. Dividend

This is the amount paid to the shareholders at a certain period of time according to the policy of the company. That amount is a return on the capital invested by the accionists mainly those who are preferential ones, in the company because ordinary accionists are effectively the owners of the company whereas preferential accionists are not the owners.

Therefore, the company is not obliged to pay the former unless there is cash enough to support payments out. The latter group are due to remuneration on their capital invested at a fixed percentage depending on the company's policy.

Finally, the preferential accionists or shareholders carry limited voting rights.

#### 4.3. Investment Decision: Net Present Value and Internal Rate of Return

Net Present Value is the most important piece of an investment project since it helps the investor in making judgement about the profitability of the investment at the end of its estimated useful life.

Net Present Value is by definition the sumation of discounted cash flows deducted from the initial investment of the project. It is a golden rule that for an investment being acceptable the net present value must be greater than zero:

$$\sum cfn - I > 0$$

where,

$\sum$  = Symbol for sumation

cfn = Discounted cash flows for the year n

I = Original Investment in the year zero

Therefore, to come to the new present value the revenue statement has to be calculated first. Once the cash flows have been determined they have to be discounted in order to get present values according to the following:

	Cash Flows	D. factor	Pr. values
year 1	2250000	$\times 1/(1+0.08)^{**1} =$	2083333
year 2	2040000	$\times 1/(1+0.08)^{**2} =$	1748971
year 3	1100000	$\times 1/(1+0.08)^{**3} =$	873215
			-----
			4705519
		less original investment	4000000
			-----
		net present value	0705519

8 per cent is the discount rate

\*\* exponential symbol

The result is that the  $NPV > 0$  is positive. The statement that  $NPV > 0$  is the starting point to make a positive judgement



about the project's profitability. Now, for calculating Internal Rate of Return many attempts have to be made by increasing the discount rate during three years until the present value summation equals the original investment so that in the end the net present value equals zero.

In the above example, the Internal Rate of Return by adjusting the discount rate (i), an IRR somewhere between 18 and 19% is obtained. Thus, 19% is above the cost of capital which is 8%, indicating that the project allows some earnings to Angotramp Limited. The earnings could be reinvested in a new business according to the company's investment strategies.

The IRR in opposite to the net present value is a relative measure whereas NPV is absolute. Internal Rate of Return is more concerned with the quality of the project, while the NPV is with the quantity of money which gives the investors a better idea about how much they are supposed to get, by how much they will become wealthier.

Many economists prefer to deal with the IRR rather than the NPV. However, the NPV is still considered to be the universal best measure for project decision making although the IRR defines precisely the rate which is expected by the company.

The author's view point is that in a decision making process, it should be both taken into consideration with a view to getting a clearer picture.

Finally, Internal Rate of Return has been defined as being the discount rate which equals the net present value of an opportunity of investment to zero.

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## Summary:

The aim of this chapter has been to discuss the importance of inflation in the value of money. In other words, the mathematics of investing a certain sum today to be collected in the future.

Moreover, the chapter has provided an essential theory regarding elements which once worked out could lead the project to achieve results which are closer to the truth, that is to say that if in a given capital investment the inflation rate is not taken into account, the results can be falsified as one dollar invested today will not correspond to one dollar collected tomorrow in its real value.

That is why a real interest rate must be determined for a project.

Furthermore, if one wants to know how much future money is worth today, in other words, by the time the money is invested, those future values have to be discounted by using the discount factor as explained in this chapter.

## CHAPTER FIVE

### THE PROJECT

#### 5.1. General Description

This project is designed to purchase a second hand panamax vessel to carry goods in bulk, essentially grain, on the basis of a shipping contract signed between Angotramp Ltd, and the Ministry of Industry for food supplies. The grain (wheat) is supposed to be carried by Angotramp's panamax vessel, Marisol, between Luanda port and Fremantle (Australia).

The creation of Angotramp Ltd is designed to bring new business to Angonave-Holding on the one hand, as well as to enable it to collect additional revenues in foreign currencies in order to reduce the strict dependence on the national foreign exchange budget.

On the other hand, the project has been conceived in order to alleviate Angonave of the exceeding staff whether shore based-administrative or crew since they will be distributed in the various sectors of Angotramp Ltd.

Angotramp on the contrary, will conduct only tramp business taking advantages of oportunities to find employments for the Marisol, seeking in this way to increase revenues per voyage due to maximum utilization of the vessel's carrying capacity. However, for investment appraisal purposes, the additional revenues, which might be collected from additional contracts of affreightment when

fixed will not be included with a view to having a better estimate regarding further financial needs.

The bill to be paid for Angotramp's services by domestic and foreign users will be in foreign currencies translated to American dollars regarding the need the company will have in building up the funding of the vessel. Nevertheless, further arrangements can be made regarding the payment of services rendered to domestic users in the local currency since the cash statement allows it.

#### 5.1.1. Vessel Description

" Marisol " m/v  
Angolan flag Bulk Carrier  
Built 1986  
GRT 37483 tons  
NRT 22827 tons  
LOA 238.01 meters  
Beam 32.24 meters  
DWT 61604 lts on 40 ft.  
7 HD / 10 HA  
Grain Capacity 2679000 CFT  
Average speed 15 knots  
FO 35 tons/day  
DO 2 tons/day  
Gearless Self-trimming

#### 5.1.2. Location

Angotramp's headquarters, will be located in the building of Angonave-Holding in Luanda, capital of the Republic of Angola. For its activities whether in domestic ports (Lobito and Moçamedes) or abroad, the company will be served by husbandry agents who will look after company interests in those ports.

#### 5.1.3. Personnel Employment

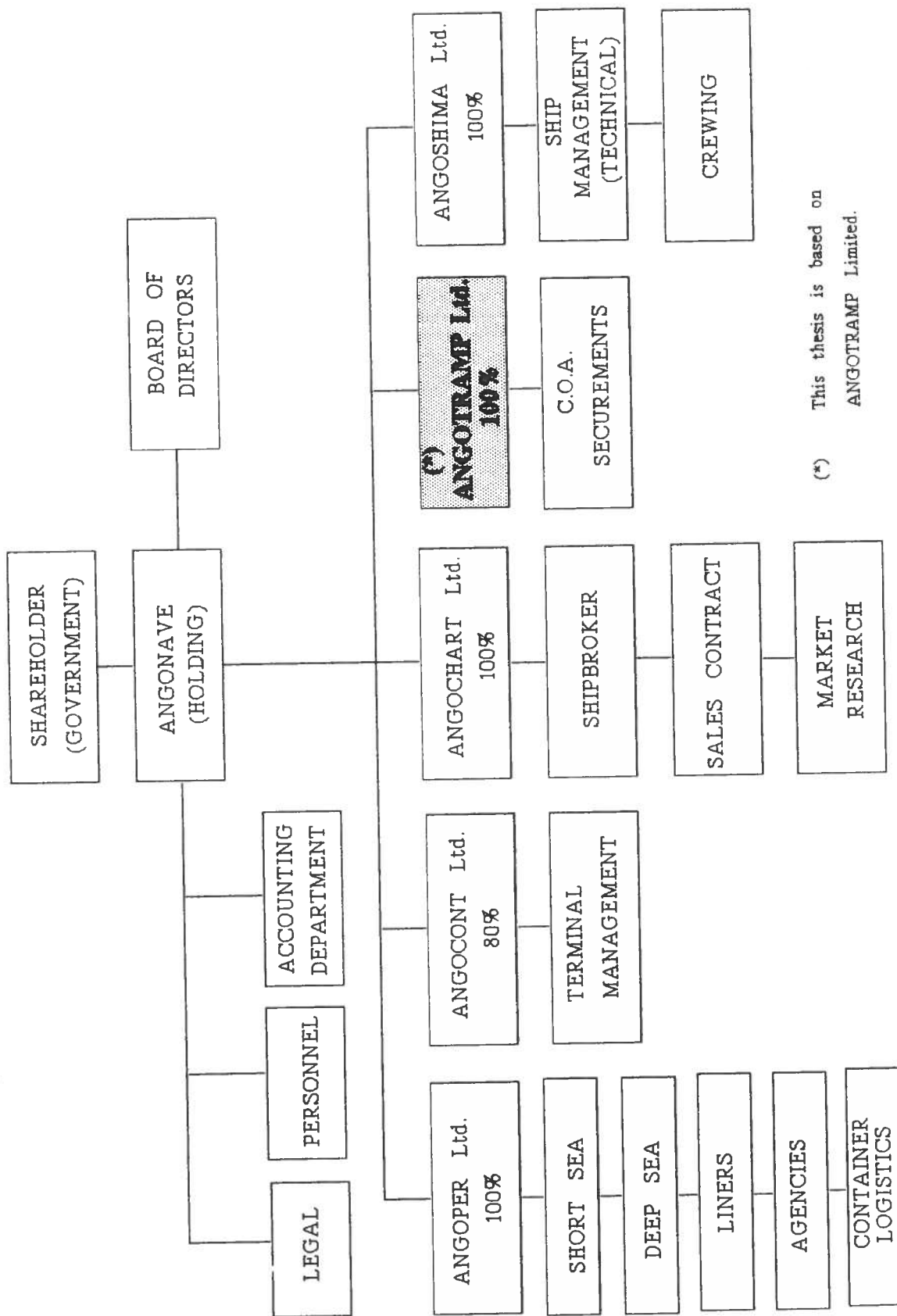
The project is estimated to employ 25 men for crewing with the annual coefficient of rotation of 50 per cent and 10 persons for shore based administrative personnel.

Regarding the crew, its management as well as the technical management of the same vessel, will be in charge of Angoshima Ltd another Angonave subsidiary. The remuneration due to Angoshima for rendering its services to Angotramp in the light of maintenance and crewing will correspond to a certain fee calculated on the basis of a time charter equivalent which will be subject to discussion and consequent agreement stated further in the management contract between Angotramp and Angoshima.

#### 5.1.4. Project Funding

The project will be funded with equity and bank loan from a state commercial bank with the right on mortgage on the same vessel at the rate of 7 per cent plus additional of 2 per cent for bank administrative costs and compensation to the bank for the incoming dollar fluctuations due to establishment of flat rates in accordance with the bank policy.

# Proposed ORGANIZATIONAL STRUCTURE of ANGONAVE HOLDING



Furthermore, equity, composed of shares of the shareholders, will fund the fixed assets except the vessel and the net working capital for the first voyage whereas the long term loan will fund the purchase of the motor vessel Marisol. The Long term loan due to the mortgagee, will be redeemed at the end of every year by annual annuity plus interest.

#### 5.1.5. Date of Realization

The project has been conceived to start at the beginning of 1994 and will extend over 7 years as it stated in the Contract of Affreightment. Nevertheless, the contract will be reviewed at the end of every year in order to make adjustments resulting from possible changes in the market.

#### 5.2. Sources of Funding

There are two ways of financing a ship: by equity or debt. The former relates to the employment of internal own funds whilst the latter is related to the amount of money which flows from outside to inside the company. That means that the money for purchasing the ship comes from external funds such as banks and other financial institutions.

The advantage of financing the purchase of a ship with equity lies in the fact that as the shipping market is so volatile, sometimes unprofitable, the shipowner is not committed to pay out for any interest and debt repayments. The financing by debt implies a strong commitment made by the

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shipowner to his creditor in terms of capital repayments and interest which may put him in a difficult position if the market conditions suddenly deteriorate.

Martin Stopford says in his book " Maritime Economics ", 1988, p. 114: " We know that the shipping market is very volatile with alternating periods of profitable and unprofitable operations. A shipowner who purchases a ship from his own funds is the sole owner of the ship and is entitled to the profit made with that vessel. He must rely on periods of profitability to compensate for periods of loss and provide an adequate average return on capital. " ( Martin Stopford, 1988, " Maritime Economics", page 114 ).

Therefore, the author agrees with the fact that financing by equity means does not involve the shipowner in any obligation in relation with capital costs. He can even run his vessel with a freight rate enough to cover his operating and voyage costs. About financing by debt Martin Stopford says:

" the provider of debt finance has no right to share in any profits that may be made but he has a legal right to receive regular payments of capital and interest however bad market may be." ( "Maritime Economics", page 114, 1988. ).

For the purpose of this project as the company Angotramp does not have funds enough and considering the fact it has signed a shipping contract with the Ministry of Industry which grants full employment of the ship, it has been decided to finance the purchase of the bulk carrier Marisol by another method of finance; namely by mortgage.

### 5.2.1. The Mortgage

As shipping is a capital intensive business, it happens very often that people or companies who do not have their own funds to purchase a ship, try to obtain them from financial organizations. These once requested, will ask for a security which grants full repayment of the loan by the borrowers. On the one side there are then, the lenders and on the other side, the borrowers. In the case of mortgage, the lenders are called mortgagees as the borrowers are treated as mortgagors.

The mortgage is the loan given by the bank to a shipowner by which the lender has the right to exercise a lien on the vessel in order to secure full payment of the vessel by the borrower. So, the lien on the vessel protects the creditor in the event of shipowner's default by deciding to take possession of the vessel and selling it with a view to recovering his money.

Therefore, mortgage is, in effect, a banker's guarantee or security.

" The mortgage would seem to constitute an ideal security since it allows the mortgagor to continue his business as a going concern, while protecting the mortgagee's security in the event of default by the owner debtor. " ( Yves Boixel, 1992 " Maritime Law", hand-out, World Maritime University ).

When mortgage is completely repaid it is said that mortgage has been discharged.

### 5.3. Investment Cost Data

Running fixed and bunker costs including datas on fuel and/or diesel consumption per day, have been obtained from Ocean Shipping Consultants " Freight Rates and Shipping Costs to 1996: Bulk Carrier and tanker profitability analysis ", 1991.

Port costs, both for Luanda and Fremantle ports have been assumed by the author for the purpose of this project.

Assumptions have also been made regarding loading/discharging rates and waiting time for both ports. The same applies to the price of the vessel and the length of life of same vessel ( sixteen years ).

Running Fixed Costs ( estimated ) of a Panamax Bulk Carrier ( 55-80000 dwt ) for 1994 year.

( in US dollars )

Manning	1496000
Repair & Mainten.	430000
Insurance	385000
Administration	138000
Capital costs:	
Vessel price:	21500000
Depreciation	1343750 (from 21500000:16 years)
Interest	1935000 at 9% interest of vs1.cost
Cap. Repayments	3071429 (from 21500000:7 years)

#### Voyage Costs:

Fuel	101.7 usd/t
Diesel	239.30 usd/t

Port costs:

Australia ( Kwinana ) 30,000 usd per call

Angola ( Luanda ) 15,000 usd per call

Stevedoring costs: FIOT basis

Other Relevant Datas

Port of Fremantle:

Loading rate ( kwinana ) : 2000/h wwd 24 hours  
shinc

Depth: 16.8 m

Length: 291 m

Waiting time: zero

Port of Luanda:

Rate of discharge: 450t/h wwd 8 hours shinc

Depth alongside the quay: 10.36 m

waiting time: one day

5.3.1. Freight Calculation

Freight or payment for the services rendered by the shipowner for carrying goods by sea from A to B , made by the charterer, the person who hires the vessel, can be calculated either cost-oriented or market-oriented. However, the latter serves only as an indication of restriction which shows the level up to which the market can bear. In other words, it serves as a rate of confrontation based on shipowner costs. If the market level is above that based on costs this fact

encourages the shipowner to increase his freight level. If it is below the shipowner's freight level, this will discourage the latter by putting him in a position of a price taker, which will make him incur in a voyage with loss.

Therefore, for calculations purposes, it is advisable to use break even, the worst possible freight level.

Freight calculation depends much on the type of charter by which the charterer agrees to hire a vessel from the shipowner. Thus, the method of calculating the freight varies according to the two types of charter: voyage and time charter.

#### 5.3.1.1. On the Voyage Charter Basis

The man in charge of the project should at this point analyze the following costs:

1. Running Fixed Costs
2. Capital Costs
3. Voyage Costs
4. Stevedoring Costs

Running fixed costs comprising manning, repairs and maintenance, insurance and administration costs, will be divided by the number of days in a year deducted from the time the ship will be in off-hire and multiplied by the number of days intended for the voyage. When divided by the number of days in a year, the result will be the daily fixed costs of the ship which represents at the same time the time charter equivalent. This means that in the case that the shipowner wants to hire his vessel on the time charter basis,

the lowest level of negotiation will be his daily fixed costs.

Therefore, he will manage in order to fix the time charter hire above his daily fixed costs with a view to making a profit taking into account that the rest of costs related to the voyage will be for the charterer's account. Regarding capital costs, some authors include them in the running fixed costs. The author thinks that they must be treated separately only when considering a single voyage for operational purposes. However, in the case of consecutive voyages, as it may be in C.O.A. and in the liner trades, capital costs should be included into fixed costs of the vessel taking into account debt repayments.

Capital costs comprise depreciation , interest on loan and capital repayments. Each of them must be divided also by 365 days less the days the ship is supposed to be in off-hire, multiplied by the number of days for the voyage with a view to obtaining the real figure to be discounted for repayment's purposes.

Voyage costs are related to the costs and charges the owner has to pay for performing the voyage. Harbour dues, channel dues, pilotage, towage, boatmen and bunkers fall in that category. Partial voyage results representing all cost items are summed up and divided by the number of tonnage the ship is supposed to carry in the voyage.

Thus, one gets the cost of the cargo per ton. This figure represents consequently, the break even point for the shipowner for the intended voyage so that he has to seek a figure above that costs per ton and fix a freight which is in this case expressed in USD dollars per ton.

When fixing the freight rate in the case of a single

voyage, the planner must consider a reasonable profit margin which enables him to build up financial commitments on interest on loan, capital repayments and depreciation. Other financial bonds are the brokerage, commissions the owner will have to face with. There is no rule for fixing a percentage for achieving that purpose but experienced managers advise for five per cent of profit margin always without ignoring the market's rate restriction.

Regarding stevedoring costs, they are not usually a primary concern for the shipowner as he leaves them for the charterer. A voyage charter is in most of the cases, performed either based on F.I.O.S. ( if general cargo ), or F.I.O.T. ( bulk cargo ) basis which means that all costs related to cargo handling are for the charterer's account.

The reason for that is that nobody else knows better about the port conditions at both ends except the charterer.

Thus, usually the shipowner prefers to transfer the risk to the charterers avoiding in this way, to include stevedoring costs in his freight calculations analysis.

Many planners include demurrage or despatch in their calculations according to their expectations on port efficiency. If included, demurrage may provide a revenue illusion in the case of not having it. Whatever is the case, the freight is safeguarded. In most cases, the demurrage rate is a matter of negotiations and from talks with first class brokers, it is fixed on five percent below the time charter equivalent which simultaneously represents the daily fixed costs. Nevertheless, these costs are not fully but partly compensated. This is the reason why demurrage is also considered compensation for liquidated damages.

#### 5.3.1.2. On the Time Charter Basis

Unlike voyage charter, freight calculations on time charter basis only accounts for the daily fixed costs plus capital costs, the shipowner will have to cover on the base of which he will fix a hire rate which is supposed to be multiplied by the number of days during which the vessel will be on-hire.

However, additional costs will have to be considered regarding the quantity of fuel which will be burnt during the trip performed between the port where the vessel is opened and the one where she is supposed to be delivered to the disponent owners.

Thus, the costs involved in this ballast leg around the fuel, port and canal dues will normally be for the shipowner's account. Nevertheless, sometimes the shipowner succeeds in getting a ballast bonus paid from the charterer or disponent owner for the referred ballast leg.

Before fixing the hire rate, the shipowner should know first his time charter equivalent which straight forward corresponds to his daily fixed costs. Nevertheless, these costs must be competitive within the market rate level. The planner must not forget that one can hardly influence the market rate. This constitutes a big challenge and incentive to the shipowner in order to reduce the level of his time charter equivalent or daily fixed costs.

Once the hire is fixed and multiplied by the days on-hire, the amount resulting from this operation must be



deducted from the amount designed for payments of the address commission and brokerage. Costs involved during the on-hire time from the port of delivery will be for the charterer's account who is also called the disponent owner due to the fact that the vessel once delivered to him is at his full disposal and responsibility.

Any quantity of bunker's remained on board the ship prior to delivery of the vessel, will be reimbursed by the charterers to the shipowner. The opposite will happen prior to redelivery of the vessel. Thus, the planner should consider the reimbursement as an extra income which is supposed to be added to the net income ( hire rate x days - commissions ).

Demurrage in this case is not the shipowner's concern since whatever the time spent in ports does not affect the hire rate as it accounts for the whole period the vessel is on-hire either on a daily or monthly basis.

Using the same data for the project, The following example of a freight calculation on the time charter basis is given:

Days on-hire: 335 days

Days off-hire: 30 days

Running Fixed costs (including capital costs):

Manning	1496000 p.a.
R & M	430000 "
Insurance	385000 "
Administration	138000 "
Depreciation	1343750 "
Loan interest	1935000 "
Principal Repayments	3071429 "
-----	
	8799179:335=26266 usd

Time charter equivalent: 26266 usd

Voyage duration: 53.6 days

Lump sum hire:  $26266 \times 53.6 = 1407857.6$  usd

Net lump sum hire:  $1407857.6 - 3.75\% = 1355062.94$

Therefore, daily hire will be 26,266 USD 5% MOLOO (more or less on owner's option). The amount of 3.75% applies to address commission and brokerages (both the shipbroker and charterbroker).

The above example justifies the formula:

Net income = hire rate  $\times$  days - commissions.

#### 5.3.1.3. On the C.O.A. Basis

The author says from his experience it is very rare to have a C.O.A. signed on time charter basis. The most common is to have it on voyage charter basis. Thus, freight calculation under C.O.A. is done the same as under the voyage

charter , expressed in usd per ton, since is a contract signed in order to perform a previously agreed number of consecutive voyages along one or more than one year.

As a contract of consecutive voyages during a certain period, the freight rate is calculated and agreed between the two parties (the owner and the charterer) only once, at the beginning of the year.

For example, obviously, if some costs increase during the following months, the freight rate will be adjusted since both contracting parties agree in the wording of an escalation clause. Like in the voyage charter, cost items to be taken into consideration are the following:

1. Running Fixed Costs
2. Capital Costs
3. Voyage Costs
4. Bunkers

A concrete example of a freight calculation under C.O.A. will be the following :

First of all, the planner has to calculate the distance between ports. In this case, the panamax vessel Marisol , is running Luanda and Fremantle ( Australia ) ports. The distance separating the two ports is 6,506 miles. Thus, one has:

Days on-hire: 335 days

Days off-hire: 30 days

Distance: speed x 1 day = days at sea

6506 : 15 x 24 = 18.7 days

both directions:  $18.7 \times 2 = 36.14$  days at sea  
in ports:

Fremantle: 2000t/h wwd 24 hours shinc

thus,

( 1 )  $24h \times 2000t = 48000t/day.$

$55000t : 48000t = 1.14days$

waiting time: 0

Luanda: 450t/h wwd 8h shinc

( 2 )  $8h \times 450t = 3600t/day$

$55000t : 3600t = 15.3days$

waiting time: 1 day

total port time: 17.4 days

(3) at loading: 1.14 days

at discharg. :  $15.3 + 1 = 16.3days$

total days (round trip) :  $36.14 + 17.4 = 53.5days$

number of trips per year:  $335days : 53.5 = 6trips$

bunkers:

fuel:  $35t \times 101.70usd/t = 3560usd/day$

diesel:  $2t \times 239.30usd/t = 479usd/day$

fuel ( sea ) :  $3560 \times 36.14 = 128658.4usd$

diesel ( sea ) :  $479 \times 36.14 = 17311usd$

total ( fo+do ) = 145969.4 usd

diesel ( ports ) :  $479usd \times 17.4 = 8334.6usd$

total bunkers ( sea+ports ) = 154304usd

Port charges:

Fremantle: 30000 usd ( aprox. )

Luanda: 15000 usd ( aprox. )

total port charges: 45000 usd

Capital Costs:

(6) depreciation:  $21500000:16$  years=1343750usd

interest rate:  $21500000 \times 9\% = 1935000$ usd

cap. repayments: 3071429usd per year

total capital costs: 6350179usd

Operating Costs:

manning: 1496000

R & M: 430000

(7) insurance: 385000

administration: 138000

total operating costs: 2449000usd

Source: " Ocean Shipping Consultants "

therefore:

total operating costs: 2449000/year

(8) " capital " : 6350179/year

" voyage " : 45000/per voyage

" bunkers " : 154304/ per voyage

Where:  $2449000:335$ days=7310.44usd/day

(9)  $6350179:335$ days=18955.75usd/day

thus,

(10)  $7310.44 \times 53.5$ days=391108.54usd/per voyage

$18955.75 \times 53.5 = 1014132.62$ usd/per voyage

all together:

	operating costs p.v.	= 391108.54
	capital       "       "	=1014132.62
(11)	voyage costs	= 45000
	bunkers	= 154304
		-----
	total costs	1604545.16 usd

the cost per ton is:

(12)  $1604545.16:55000t=29.17$  usd per ton

The costs with the agency have been included in the administration costs as well as the brokerage and the address commission as the broker and the agencies would represent the office abroad. However, this is a matter of shipowning policy. 29.17 American dollars per ton is the cost where the shipowner breaks even.

Therefore, an additional of at least five percent should be added to it in order to make some profit. Nevertheless, this is a matter of negotiation with the other party. It may happen that along the project there is an increase in bunkers. If so, the shipowner must create a hedging in order to cover the difference resulting from the increase on costs with the bunkers.

Assuming that during the next period only the price of fuel has been increased from 101.70 USD/t to 110 USD /t.

Thus, the adjustment should be made having the owner as a beneficiary. However, if the price of fuel falls down from

101.70 USD /t to 90 USD/t, this will benefit the charterer because the shipowner will have to compensate him. But, the latter case rarely happens as the fuel price usually has a growing tendency.

Going back to the increase in the price of fuel from 101.70 USD/t to 110 USD/t, before proceeding, it might be necessary to disclose again the structure of costs in (11). This time the disposition should be the following:

	operating costs p.v.	= 391108.54
	capital costs "	=1014132.62
	voyage costs	= 45000
(13)	fuel	= 128658.4
	diesel	= 25645.6
		-----
	total costs	1604545.16

From that above, it can be stated that the participation of the fuel in the total costs is 128,658.4:1,604,545.16 which equals 0.08 USD. Total costs correspond to 55,000 tons which are supposed to be carried in the voyage from which results a break-even-freight of 29.17 USD per ton as per (12). Thus, having all these elements, adjustment to the freight would be made by resolving the following operation:

$$55000 \times 0.08 \times (110 - 101.70) = 36520 \text{ USD}$$

Thus, the amount of USD 36,520 is the lump sum which shows by how much the adjustment to the freight should be made as a result of an increase in the fuel of 8.3 dollars stated in a given period.

The planner should know that the days to be considered

for freight calculation purposes, are the productive days in which the vessel is on-hire according to (9).

As can be seen, stevedoring costs and risks are transferred to the charterer; thus, the contract of carriage has been signed on F.I.O.T. basis which means free-in free-out and trimmed. In other words, the owner is free of any responsibility related to cargo handling whether in a loading or discharging port.



#### 5.4 Freight Negotiations Under COA

All negotiation despite involving different skills to be successful requires power. Both parties involved in the negotiation must be in equal position and have the same power.

Negotiators should know that when coming into discussions, none of them should bear in his mind the idea to win or destroy his counterpart. No one of the following combinations, win-loose or loose-win, will succeed except the combination win-win. If the importer or the shipper needs a vessel to transport his cargo from A to B, the same need applies to the owner who needs those goods to employ his vessel .

Thus, both parties must come up with reasonable proposals in order to achieve a good fixture which will greatly benefit both. From the owner side, he must come up with an indication about the freight rate resulting from previous calculations.

Later on, as long as the negotiations take place, a new figure could be agreed between the two parties when considering other relevant cost factors e.g. allocation of stevedoring costs, bunker adjustment factors, taxes on freight and vessel and so on.

Regarding the charter party, both parties must be acquainted and very familiar with the relevant clauses inserted in the intended charter party.

Each party must make sure that they understand the meaning of the wording in the agreed charter party and if

clauses are not clear enough, then they must be replaced or complemented with additional ones.

These additional clauses, are also known as the rider which have more value than the original ones when it comes to arbitration. Shipbrokers and charterer's brokers are experts in the matter so that once they are employed, may give legal and adequate technical advice to both.

The shipbroker and charterbroker's role has not been mentioned earlier because in most cases of a C.O.A. , from author's experience negotiations are carried out directly by the owner and the shipper. Nevertheless, whenever several problems arise, and with a view to avoiding further complications, it is more suitable to employ shipbroker services.

Demurrage or despatch may be included or not in the calculations depending on the owner's expectations about time to be spent in ports.

Adjustment problems may arise taking into account that between two voyages the prices either of bunkers or port charges may increase. Therefore, a bunker's clause with the following wording should be inserted in the C.O.A.

"If in a period between two or more voyages there is an increase in the fuel price, adjustment will be made to the freight in lumpsum form. Moreover, the amount of this adjustment will be calculated based on the difference between the previous level of fuel price and the actual level multiplying by the ratio of fuel costs over total costs and finally by the total cargo tonnage intended for the voyage. The referred adjustment must be made before the commencement of next voyage.

Payment of adjustment to be made by the charterers or shippers as it is the case, in a lump sum of USD ( American dollars ) against invoice issued by the owner of the vessel or disponent owner as it is the case.

The ratio of fuel costs over total costs is subject to the terms of agreement signed by both parties until the day of first lay-day. " ( source: broker's advice ).

Nevertheless, both parties should be aware of any increase in the fuel price in due time through the acquisition of a " platts oilgram bunkerwire " which is issued by a competent worldwide organization on a weekly period.

The following is an example of a platts oilgram bunkerwire, known by the short name of " platts " among professionals in the worldwide shipping industry:

SUBJECT : PLATTS  
PLATTS OILGRAM BUNKERWIRE

MARCH 26

NO. 13

ESTIMATED MARINE FUEL OIL SPOT PRICES

	IFO - 380 CST	IFO - 180 CST	DIESEL
AMSTERDAM	70.00-72.00	78.00-79.00	150.00-155.00
ANTWERP	71.00-72.00	80.00-82.00	154.00-159.00
HAMBURG	73.00-76.00	82.00-89.00	172.00-175.00
FRANCE (1)	75.00-80.00	85.00-86.00	177.00-185.00
SPAIN (1)	75.00-76.00	88.00-89.00	215.00-220.00
LAS PALMAS (1)	80.00-81.00	87.00-88.00	187.00-198.00
CEUTA (1)	80.00-81.00	93.00-95.00	190.00-200.00
ITALY	84.00-86.00	88.00	195.00-197.00
SUEZ PORTS	88.00	85.00-88.00	330.00
PIRAEUS	78.00-80.00	165.00-170.00	176.00-178.00
DAKAR (1)	---	78.00-80.00	215.00-220.00
DURBAN (1)	---	92.95	305.00-310.00
JEDDAH	---	80.58	189.20
DAMMAN	---	80.58	181.50
RAS TANURA	---	NO QUOTES AVAILABLE	181.50
KUWAIT	64.00-65.00	73.00-74.00	240.00-245.00
KHOR FAKKAN	97.00-100.00	102.00-105.00	285.00-295.00
JAPAN	67.00-70.00	75.00-78.00	183.00-185.00
SINGAPORE	70.00-73.00	74.00-78.00	285.00-295.00
SOUTH KOREA	94.00-95.00	96.00-98.00	260.00-270.00
HONG KONG	128.00-130.00	128.00-130.00	265.00-270.00
SYDNEY (1)	80.00-90.00	86.00-95.00	220.00-245.00
CRISTOBAL (1)	63.00-65.00	69.00-71.00	210.00-220.00
MONTREAL (1)	67.00-68.00	71.00-72.00	210.00-220.00
NEW YORK	71.00-73.00	74.00-77.00	210.00-215.00
PHILADELPHIA	61.00-63.00	65.00-67.00	170.00-175.00
NORFOLK	61.00-63.00	65.00-67.00	170.00-175.00
NEW ORLEANS	50.00-52.00	57.00-64.00	171.00-230.00
HOUSTON	58.00-60.00	60.00-65.00	210.00-220.00
LOS ANGELES (4)	67.00-70.00	70.00-75.00	170.00-210.00
SEATTLE (4)			
PORTLAND (4)			

Source: Broker's data

-----o-----  
Summary:

The aim of this chapter has been to describe the investment itself, its purpose, costs and discuss the skills of freight negotiations which lead to the fixture of the agreement under this project.

Given the fact the investment consists of purchasing a second-hand panamax bulk carrier, a description about physical characteristics of the vessel had to be given; the optimum number of personnel to be employed for the same vessel.

The funding of the project at 100 percent of vessel's costs aimed to expose the will domestic commercial banks have, to give incentives to domestic shipowners whose vessels are registered in Angola. Although subsidizing local shipowners, mainly state-owned companies, state commercial banks want to ensure efficiency in the management of those companies so that a mortgage has been imposed as a collateral.

Furthermore, this chapter refers to the need of elaborating a freight calculation showing the point where the shipowner breaks even, from which he will fix a higher freight rate with the agreement of the charterer and taking into account the market restriction. Moreover, the contract of affreightment could take place under both regimes:

voyage charter

time charter

in the first case, the agreement would fix a freight rate of

X USD per ton while in the second case, it would fix a charter hire per day or per month.

Finally, freight negotiations have been discussed as well as the power of the negotiators which lead to a fixture of the agreement ( charter-party ).

## CHAPTER SIX

### THE CONTRACT OF AFFREIGHTMENT

#### 6.1. General

In English shipping literature, the Contract of Affreightment has an overall definition since it is defined as an agreement which brings the owner of the vessel and the charterer together with a view to transporting goods from one port to another.

In Portuguese shipping literature, a specific definition for contracts of affreightment has been found: "Contractos Continuados" which means in literal translation "Consecutive Contracts" which gives an idea about the need to perform consecutive voyages in order to deserve such treatment.

However, in an attempt to give some definitions to contracts of affreightment, perhaps one should better take into consideration the features which are not common in the various ways of contracting a vessel for carriage of goods. The wording "consecutive voyages" does not suit the purpose here, as other ways of chartering e.g. time, bareboat and voyage charter could be arranged in order to allow vessels to perform consecutive voyages. Freight determination, lay days do not suit the definition purpose as well.

Therefore, it appears that the only uncommon factor is

that one related to the possibility of renegotiation of certain items or clauses of the contract along the project.

Thus, the contract of affreightment is a contract which involves two sides ( charterers and owners ) with a view to transporting goods from one port to another in consecutive voyages whether in short or long run periods which enables renegotiation by both parties and the establishment of new addendums on certain items whenever a new situation arises as a result of new market variations.

The wording " renegotiation on certain clauses of the contract " appears not to be possible in other forms of contract e.g. time, bareboat and single voyage charter. Perhaps that fact is linked to the long run factor as contract of affreightment usually takes longer than one year.

" Typically , the C.O.A. is recognized as a contract covering a specified, homogeneous cargo; large quantities; long periods; certain ports and several voyages. None of these features can, however, separately provide a basis for a definition of a C.O.A. " ( Lars Gorton and Rolf Ihre, 1990 II edition, " Contracts of Affreightment and Hybrid Contracts ", p. 3, ) ".

## 6.2. Standard Forms of Contracts of Afreightment

There are two standard forms of contracts of affreightment in use: the Intercoa 80 is issued by intertanko in Oslo and adopted by Bimco. Intercoa 80 is intended to be used in combination with the voyage charter party form, intertankvoy 76 or any other voyage charterparty form. The



tercoa 80 is designed especially for the carriage of petroleum products.

The volcoa is issued by Bimco and is designed mainly for transportation of bulk dry cargoes. Also the volcoa is a chartering contract intended to be used in combination with a single voyage charter party. As most of contracts of affreightment have to be tailor-made for the specific situation, the standard forms intercoa 80 and volcoa are useful mainly as check lists when a charterer and an owner negotiate a C.O.A.

( Lars Gorton and Rolf Ihre, 1990, 2nd edition, "Contract of Affreightment and Hybrid Contracts ", page 5 ).

It can be stated from the above that a standard form contract of affreightment is meaningless if a single voyage charter party and a letter of nomination are not attached thereto.

The letter of nomination results as a consequence of no issuance of a single voyage charter party for the incoming voyages. It would be laborious on the performance of the next voyages for both parties to come up with a new charter party. So, it is much easier to sign a charter party which will bind both parties to the C.O.A. for the entire period and whenever a new voyage is to be performed to issue a letter of nomination which in this regard is deemed to be a single voyage charter party.

Moreover, the charter party initially issued is incorporated in C.O.A. which is fully governed by its terms and conditions.

In conclusion, the parties involved in a C.O.A. need three basic documents to legitimate the referred contract: the C.O.A terms, a single voyage charter party attached

thereto, and finally, a letter of nomination for each performed consecutive voyage.

For the purpose of this project volcoa will be used because it is the contract of affreightment which suits the intended purpose when dealing with dry bulk cargoes e. g. wheat.

### 6.3. Letter of Nomination

According to Lars Gorton and Rolf Ihre in " Contracts of Affreightments and Hybrid Contracts ", 1990, p. 82 ", Volcoa especially mentions the situation where the parties have agreed not to issue a charter party for each voyage but instead have a fixture note- here called letter of nomination- which shall contain reference to the applicable proforma charter party. It also gives a guideline about the contents of the fixture note / letter of nomination. According to volcoa the letter of nomination shall contain:

- Description of the vessel
- Quantity of cargo
- First lay day and cancelling date
- All necessary details to enable the applicable proforma charter party to be completed

( Vide volcoa clause 13. )

The letter of nomination as can be seen from the above, relates to nomination of the vessel which has to be done by

the owner between a consecutive voyages to the charterer. The owner's duty is to let the charterer or shipper know whether the next voyage will be performed by the same vessel or by a vessel substitute, days before the lay days previously agreed by both parties for the given shipment.

Obviously, the owner is owed a confirmation of vessel's nomination by the charterer in due time.

As already mentioned lay days within which the vessel has to call the port for loading the cargo are previously agreed under C.O.A. Sometimes, both parties may agree on F.E.S. which means Fairly Evenly Spread and enables the owner to nominate a vessel according to his personal schedule but in a fair way without any prejudice for his counterparty. If so agreed, the owner can take advantage of that agreement to employ his vessel in the spot market with a view to making some money out.

The following is an example of a letter of nomination:

94.03.05

19:19

To: Logistic Division of Ministry of Industry / Luanda  
Att: Dr. Jose Amaro  
Ref: Nomination of vessel

On account of the Logistic Dept. of the Ministry Industry / Luanda and as a cargo carriers we, hereby, nominate " m/v Marisol" or sub. in owner's option to perform the second lifting under coa Angotramp Ltd / Mind dated 5th October 1993

M/V " Marisol " or sub.  
Angolan flag      Bulk carrier  
Built 86  
GRT 37483 tons  
NRT 22827 tons  
LOA 238.01 M  
DWT 61604 LTS on 40 FT  
7 HD / 10 HA  
Grain capacity 2679000 CFT  
Lay days: Fremantle 20th march/3rd April  
Estimated Intake: ABT 60000 MTons

Look forward yr kind acceptance  
Bstrgrds  
Angotramp Ltd / Silva Fortes

Nevertheless, there are situations where a letter of nomination involves more than two parties. The situation arises when a given shipowner succeeds in getting a C.O.A. from a certain shipper but has no vessel with characteristics which are suitable to carry out the voyages under the contract.

Therefore, he will have to hire a vessel in turn from another shipowner. Thus, there will be two nominations: one from the shipowner with a vessel to the other one without any vessel and the latter in turn will give a final and definite nomination to the shipper.

Upon nomination of a substitute vessel ( TBN ), owners should take some precautions about the vessel cargo space,

especially its cubic volume due to the stowage factor of the intended cargo to be loaded in, as he is dealing with an unknown vessel.

A T.B.N. vessel must have more or less the same characteristics regarding type, fitness, hold dimensions and speed as the vessel initially agreed in the contract by both parties. If the owner fails to do so, charges may be taken against him.

#### 6.4. Example of the Contract between the Parties bound to this Project.

The following is the Contract of Affreightment signed between Angotramp Ltd and the Ministry of Industry for food supplies.

As can be seen, the agreement includes the contract of affreightment itself, the applicable charter party and the additional clauses to the charter party.

<p>3 Owners (indicate name, address &amp; telex number) Angotramp, lted R. Sequeira Lukoki, 31 Telex 3124 Tel. 330204 Luanda</p>		<p>2 Place and date of Contract Luanda, 1/x/93 (Angola)</p>	
<p>5 Description of cargoes (Cl 1) Australian wheat ( Semolina )</p>		<p>4 Charterers (indicate name, address &amp; telex number) Ministry of Industry Logistic Department Telex 4213 Luanda</p>	
<p>6 Loading port(s) or range(s) (Cl 1) Fremantle (Kvinana)</p>	<p>7 Discharging port(s) or range(s) (Cl 1) Luanda and/or Lobito</p>		
<p>8 Period of Contract (state period, first layday for initial vessel and cancelling date for final vessel) (Cl 2) 5.01.94/30.12.94</p>	<p>9 Total Quantity (state min. and max. quantities and at whose option) (Cl 2) Min 330000 metric tons Owner's option</p>		
<p>10 Quantity per shipment (state min. and max. quantity of Owners' option) (Cl 3) 55000/60000 metric tons min/max owner's opt.</p>			
<p>11 Final shipment (state min. quantity) (Cl 4) Min 55000 MT</p>			
<p>12 Programme of shipments (only to be filled in if specific programme agreed) (Cl 5) Fairly Evenly Spread (FES)</p>			
<p>13 Declaration of loading port(s) (Cl 6) Charterers to declare loading port to owners 5 days before the commencement of each voyage</p>		<p>14 Declaration of discharging port(s) (Cl 7) Charterers to declare disch. port 5 days before commencement of each voyage</p>	

15 Performing vessels (Cl 8)	
( see additional clauses )	
16 Nomination of vessels (Cl 9)	
( see additional clauses )	
17 Cancellation of a nominated vessel (state number of days) (Cl 9)	
( see additional clauses )	
18 Freight rate (Cl 11)	19 Freight payment (currency and when/where payable, also state beneficiary and bank account) (Cl 11)
30 USD/metric ton fiot	(see add.clauses)
20 Demurrage/Despatch money (state rate(s) or scale) (Cl 12)	21 Applicable charterparty(ies) (Cl 13)
As provided by the applicable Charter Party	Australian wheat charter 1990.
22 Owners' failure to nominate tonnage (state if other than 3 times) (Cl 15)	23 Charterers' refusal of tonnage (state if other than 3 times) (Cl 16)
As per clause 15 of coa	As per cl. 16 of coa
24 Charterers' option of cancelling for late arrival (state if other than 3 times) (Cl 17)	25 Interruption of Contract (state number of days/months) (Cl 19)
As per cl. 17 of coa	
26 War cancellation (indicate other countries, if any, agreed) (Cl 20)	
27 Law and Arbitration (state 21.1, 21.2 or 21.3 of Cl 21, as agreed, if 21.3 agreed state place of arbitration) (if not filled in 21.1 shall apply) (Cl 21)	28 Commission and to whom payable (Cl 22)
see applicable Charter Party.	see applicable Ch. Party.
29 Names and addresses for nominations/notifications by the Owners (Cl 23)	30 Names and addresses for nominations/notifications by the Charterers (Cl 23)
see add. clauses	see add. clauses
31 Numbers of additional clauses covering special provisions, if agreed	
As much as needed	

It is mutually agreed between the party mentioned in Box 3 (hereinafter referred to as "the Owners") and the party mentioned in Box 4 (hereinafter referred to as "the Charterers") that this Contract shall be performed in accordance with the conditions contained in PART I including additional clauses, if any agreed and stated in Box 31, and PART II. In the event of a conflict of conditions, the provisions of PART I shall prevail over those of PART II to the extent of such conflict but no further.

Signature (Owners) Operations Manager, Angotram Ltd	Signature (Charterers) Chief Mat. Log. Dept./IND Josefmar
---	---

1. Subject of Contract	1	the quantity of cargo to be shipped and the necessary details to enable the applicable proforma charterparty to be completed	76
The Charterers undertake to provide for shipment and the Owners undertake to transport the cargoes as described in Box 5 from the port(s) or range(s) stated in Box 6 to the port(s) or range(s) stated in Box 7	2	ed	77
	3	The appropriate proforma charterparty supplemented by the corresponding letter of nomination shall be considered as a separate single voyage charterparty	78
	4		79
	5	In the event of any conflict between the terms and conditions of a single voyage charterparty issued and this Contract, the latter shall prevail	80
2. Period of Contract - Total Quantity	6		81
This Contract is made for the period stated in Box 8	7		82
The first layday for the initial vessel shall not be before the commencement of the period stated in Box 8 unless with the Charterers' consent.	8		83
No cancelling date under any individual charterparty shall fall later than the final date of the Contract period stated in Box 6 unless with the Charterers' consent	9		84
	10	If, as per agreement stated in Box 12, the Charterers have undertaken to give a specific programme at a particular time but fail to do so in due time, any penalties incurred or any loss suffered by the Owners thereby shall be refunded by the Charterers	85
	11		86
	12	Any quantity not carried due to such failure shall be deducted from the total contracted quantity, but no claim whatsoever the Owners may have on the Charterers shall be prejudiced thereby	87
	13		88
	14		89
For the purpose of this Clause, the taken quantity for each shipment shall apply	15		90
3. Quantity per Shipment	16	15. Owners' Failure to Nominate Tonnage	91
The quantity of each and every shipment shall be at the Owners' option within the limits stated in Box 10	17	Should the Charterers fail to nominate tonnage according to the applicable provisions of this Contract, the corresponding quantity shall be deducted from the total contracted quantity, except if such failure results from any event which cannot be avoided or guarded against	92
	18		93
	19	However, the Charterers shall have the option to postpone the shipment within the period of the Contract, exercisable by giving notice of their decision not later than one month after the failure and advising the Owners about adjustment of the programme of shipment	94
4. Final Shipment	20		95
The Owners shall not be bound to carry any balance of the total quantity which would be under the minimum quantity stated in Box 11	21		96
	22	If the Owners have failed to nominate tonnage more than three times, unless another number of times is provided in Box 22, then the Charterers shall have the right of cancelling the remaining part of this Contract. Such right shall be exercised by written declaration and shall not be applicable to any vessels which have been validly nominated	97
5. Programme of Shipments	23		98
The Charterers' programme of shipments and the Owners' nominations shall be fairly evenly spread over the period of the Contract, unless a specific programme is stated in Box 12	24		99
	25	Whether or not the Charterers exercise any option under this Clause, no claim whatsoever that they may have on the Owners shall be prejudiced thereby	100
	26		101
6. Declaration of Loading Port(s)	27	16. Charterers' Refusal of Tonnage	102
When various loading ports are agreed, the Charterers shall declare the loading port(s) for each individual voyage latest as stated in Box 13	28	If the Charterers have refused tonnage validly nominated and in due time, the corresponding quantity shall be deducted from the total quantity under this Contract, unless the refusal results from an event which cannot be avoided or guarded against	103
	29		104
7. Declaration of Discharging Port(s)	30	However, the Owners shall have the option to postpone the shipment within the period of the Contract, exercisable by giving notice of their decision not later than one month after the failure and advising the Charterers about adjustment of the programme of shipments	105
The Charterers shall declare the discharging port(s) for each individual voyage latest as stated in Box 14 provided that such declaration is made in sufficient time to permit, if necessary, the preparation of the loading plan and the adjustment of the vessel's draft and trim	31		106
	32		107
	33		108
8. Performing Vessels	34	17. Consequences of Cancelling a Nominated Vessel	109
The Owners shall nominate vessels of the description stated in Box 15	35	If the Charterers have exercised their option to cancel a voyage on three occasions, unless another number of times is provided in Box 23, they shall, on the next or any subsequent occasion, have the right to cancel the remaining part of this Contract, but no claim whatsoever they may have on the Owners shall be prejudiced thereby	110
	36		111
9. Nomination of Vessels	37	18. Late Payment of Freight and Demurrage	112
The Owners shall nominate each vessel in the manner stated in Box 16 stating reference to the Contract, the vessel's name, approximate quantity of cargo required and first layday for such vessel	38	18.1 Interest - Interest at 2 (two) per cent per month or pro rata part of a month shall be payable by the Charterers on the amount of freight or demurrage due or any part thereof from the date of the Charterers' receipt of the Owners' properly documented invoice shall bear interest from the date of the invoice	113
	39		114
	40	18.2 Guarantee - In the case of any dispute on the amount of freight or demurrage due to the Owners and without prejudice to sub-clause 18.1, the Charterers shall provide a first class bank guarantee for the disputed amount in full of payment, pending settlement of the dispute. The party eventually proven to have been in error shall bear the cost of such guarantee	115
The cancelling date of each nominated vessel shall be the number of days stated in Box 17 after the first layday	41		116
	42	18.3 Suspension - As long as any freight or undisputed demurrage under this Contract is due but not paid or not guaranteed as per sub-clause 18.2, the Owners shall not be obliged to	117
10. Consequences of Cancelling a Nominated Vessel	43	(i) nominate further tonnage hereunder,	118
If a voyage is cancelled in accordance with appropriate clause of the applicable charterparty, the corresponding quantity of cargo shall be deducted from the outstanding balance	44	(ii) send any vessel to the loading port	119
	45	(iii) commence loading of any vessel	120
However, if the cancellation is caused by incident within the Owners' control, the Charterers shall have the option to postpone the shipment within the period of this Contract by giving notice of their decision to the Owners not later than one month after the cancellation	46		121
	47	Time lost thereby to any vessel held ready for loading or for nomination shall be paid by the Charterers to the Owners at the applicable demurrage rate	122
	48		123
Cancelling for late arrival shall only affect the voyage in question	49	18.4 Cancellation - If the Charterers have failed to pay freight or demurrage or to give a bank guarantee as per sub-clause 18.2 when such freight or demurrage is due, the Owners may give notice to the Charterers that unless they pay or provide a bank guarantee within 96 running hours of receipt of this Contract, the Owners shall be entitled to cancel the remaining part of this Contract. This option to cancel must be exercised during the first 15 (fifteen) running days after the expiry of the 96 hours' delay, but shall cease to exist after actual payment, even if late	124
	50		125
11. Freight	51	18.5 Liability - Whether or not the Owners exercise their rights under sub-clauses 18.3 or 18.4, no claim whatsoever that they may have on the Charterers shall be prejudiced thereby	126
For each and every voyage under this Contract, the freight shall be paid at the applicable rate stated in Box 18 to the party and in the manner indicated in Box 19	52		127
	53		128
	54		129
If Boxes 18 and 19 are not filled in, the freight shall be paid at the rate and in the manner provided for in the applicable charterparty(ies)	55		130
	56		131
The Charterers shall not be entitled to make any deductions from the freight unless specifically agreed	57		132
	58		133
	59		134
12. Demurrage	60		135
Demurrage shall be computed according to the terms of the applicable charterparty(ies) and shall be paid to the Owners by the Charterers in the same manner as freight and at the rate(s) stated in Box 20 or, if not filled in, as provided for in the applicable charterparty	61		136
	62		137
Despatch Money	63		138
If specifically agreed in Box 20, despatch money shall be paid as per the applicable charterparty	64		139
	65		140
	66		141
13. Applicable Charterparty(ies) - Letters of Nomination	67		142
Each and every voyage under this Contract shall be governed by the terms and conditions of a voyage charterparty, as per the attached proforma(s) as listed in Box 21 which shall be deemed incorporated in this Contract	68		143
	69		144
Upon any valid nomination of a performing vessel, if no single charterparty is issued, a letter of nomination shall be issued which shall contain reference to the applicable proforma charterparty, confirm the description of the vessel	70		145
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	73		148



**PART II**  
**"VOLCOA" Standard Volume Contract of Affreightment**

<b>19</b>	<b>Interruption of Performance</b>	<b>158</b>	<b>21.2</b>	<b>If agreed and stated in Box 27 this Contract shall be governed by U.S. Law and all disputes arising out of this Contract shall be arbitrated at New York in the following manner:</b>	<b>191</b>
159	19.1 If the performance of this Contract in part or in whole is interrupted through any event whatsoever which cannot be avoided or guarded against by either party, the performance affected shall be suspended until the hindrance ceases to have effect.	159	192		192
160	19.2 Whether the hindrance is an event cannot be avoided or guarded against and whether or not liability for the interruption is accepted, if the hindrance is such that it is evident that it will last for more than six months (or any other period stipulated in Box 25) a party not responsible for breach of the contract may cancel the contract.	160	193		193
161	19.3 Whether or not the option in clause 19.1 is exercised, no claim for damages, loss of profit or reimbursement against the party responsible for any breach shall be put forward thereby.	161	194		194
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# AUSTRALIAN WHEAT CHARTER 1990



RECOMMENDED by  
The Documentary Committee of the  
Baltic and International Maritime  
Council (BIMCO), Copenhagen



"AUSTWHEAT 1990"

Dated at Luanda this third day  
of November 1993

It is agreed between Angotramp, Limited

6 shipments each  
55000/60000 min/max  
wheat in accordance with IHO regulations.

Motorship called the Marisol M/V  
and 22827 net tonnage register, and 61504  
gross tonnage.

Angolan Ministry of Industry

and Australian Wheat Board of Melbourne, Charterers.

Logistic Division of the Ministry of Industry

Charterers.

(\*Delete/Complete as necessary)

- Shippers 1—It is understood by Owners and by Charterers of the Vessel that throughout this Charterparty the party referred to as "Shippers" shall be the Australian Wheat Board of Melbourne.
- Loading Port 2—That the Vessel, being in every way fitted for the voyage shall, with all convenient speed, after completion of her present voyage, proceed, as ordered by the Shippers, to ~~one or two ports out of Fremantle, Geraldton, Albany, Esperance in Western Australia, or to one or two ports out of Port Giles, Wallaroo, Port Lincoln, Port Pirie, Port Adelaide, Thevenard in South Australia, or to Geelong and/or Portland in Victoria, or to Port Kemble and/or Newcastle in New South Wales, or to one or two ports out of Brisbane, Gladstone, Mackay in Queensland~~ and there load according to the custom of the port, always afloat, at such safe dock, pier, wharf or berth, as ordered by the Shippers, ~~and there load wheat in bulk or silo from the Shippers or their Agents, which the Charterers bind themselves to provide not exceeding what the Vessel can reasonably stow and carry in addition to her tackle, apparel, provisions, fuel and furniture.~~
- Shifting of Vessel 3—Shippers shall have the option of ordering the Vessel to shift loading berths at Owners' expense on one occasion at each loading port. All time used for shifting between first and second loading berths shall count as laytime. ~~or if the vessel is on demurrage, as time on demurrage.~~
- Destination 4—Being so loaded, the Vessel shall proceed with all reasonable speed to discharge at Luanda-Angola one safe and always accessible anchorage always afloat and there deliver the cargo in accordance with Clause 18 at any customary dock, wharf, pier or berth as ordered by Receivers or their agents, where the Vessel can safely lie, always afloat, having been paid freight at the rate hereinafter mentioned, not less than ~~within 48 hours of arrival at the first port of discharge.~~
- Rotation of Ports of discharge 5—If the Vessel discharges at more than one port the discharging ports shall be in geographical (mileage) rotation from the port or point where first discharging port orders are given.
- Capacity 6—The Owners undertake that the Vessel shall load ~~more or less at Owners' option.~~ tonnes of 1,000 kilos (the mean cargo quantity).
- Cargo Delivery at Loading Port or Ports 7—At the loading port the cargo shall be delivered into the holds, loaded, stowed and trimmed, at the expense of the Shippers.
- Freight 7—Freight shall be payable at the rate of:

Thirty United States American Dollars, FIOT

all per tonne of 1,000 kilos Bill of Lading weight.

The said freight shall be paid 90% before breaking bulk, balance plus demurrage less despatch, if any, upon completion of discharge and surrender of laytime statements for both ports.

Declaration of Loading Area if in Ballast	8—The Owners of a Vessel proceeding in ballast to Australia shall advise the Shippers of the outward route. In the event of the Charterers having full range of loading ports, the Shippers shall declare whether the Vessel is to load in Eastern States, or Western Australia 48 hours before the Vessel is due off Cape Town, Aden or Panama, provided that the Master has given radio notice to the Shippers (telegraphic address "3MWheatbld Melbourne") 96 hours before she is so due. In the case of Vessels proceeding from the Indian Ocean or Pacific Ocean area, the Shippers (telegraphic address as above) shall declare Eastern or Western Australia loading upon receipt of the Master's application, which is to be made up to 24 hours before sailing from final port.	42 43 44 45 46 47
	Upon receipt of the foregoing declaration, the Master or Owners shall telegraph "3MWheatbld Melbourne" advising (A) estimated date of arrival at the loading area/loading port, (B) whether or not the Vessel is expected to be ready to load on arrival in accordance with Australian Grain Loading Standards. Owners' local agents to keep "3MWheatbld Melbourne" advised of any change in the Vessel's movements.	48 49 50
Orders for Loading Port	9—If proceeding in ballast the Master shall apply to the Shippers (telegraphic address "3MWheatbld Melbourne") for loading port orders by radio 96 hours before arrival at the loading area nominated under Clause 8 and orders for loading port shall be given by the Shippers by radio within 48 hours of receipt of Master's application.	51 52 53
	Orders for a Vessel with cargo for, or discharging in, Australia shall be given to the Master or Owners' Agents at the Vessel's final discharging port upon the Master or Owners' Agents giving the Shippers written, telexed or telegraphic notice of the Vessel's position and expected readiness, such notice to be given at least three days before her expected departure from final discharging port.	54 55 56
	Failure so to radio or telegraph or telex under this Clause shall not be considered a breach of this Charterparty, but if the Shippers are not so notified, three days shall be added to the time allowed for loading.	57 58
	Upon receipt of loading port orders by a Vessel in Australian waters, if the Master does not intend thereafter to proceed to the loading port direct, but via another port for the purpose of bunkering, he shall so inform the Shippers. If after orders for loading port are given the Vessel is delayed for at least 48 hours in all, the Master shall inform the Shippers by telegram or radiogram of such delay and they shall have the right of ordering Vessel by telegram or radiogram to a different loading port in the same State, if such orders are given within 24 hours (Sundays, holidays and Saturdays excepted) of receipt of the Master's telegram or radiogram; and such orders shall be acknowledged to the Shippers by telegram or radiogram as soon as possible after receipt thereof by the Master.	59 60 61 62 63 64
	Orders for second loading port (if any) shall be given by the Shippers within 24 hours after commencement of loading at the first port, unless previously given.	65 66
Survey at Loading Port	10—Before loading is commenced the Vessel shall pass the customary survey of an Australian Commonwealth Government Marine Surveyor, and a recognised Marine Surveyor approved by the Shippers. Additionally, the Vessel shall pass any survey/inspection required under State and/or Federal Legislation.	67 68 69
Loading	11(a)—The cargo shall be loaded within the time allowed stipulated below based on the mean cargo quantity specified in Clause 5 provided that the Vessel can receive at the appropriate pro-rata rate.	70 71
	(i) For a mean cargo quantity above 5,000 tonnes up to 10,000 tonnes the time allowed for loading shall be three (3) days;	72
	(ii) For a mean cargo quantity above 10,000 tonnes up to 25,000 tonnes the time allowed for loading shall be four (4) days;	73
	(iii) For a mean cargo quantity above 25,000 tonnes up to 60,000 tonnes the time allowed for loading shall be five (5) days;	74
	(iv) For a mean cargo quantity above 60,000 tonnes the time allowed for loading shall be six (6) days;	75
	All weather working days of 24 consecutive hours (except Saturdays, Sundays, holidays and days on which no work is performed owing to weather conditions during normal and customary working hours at the port) provided that Saturday shall count as a full day if work is performed on that day, subject to a reduction of half a day if no work is performed after 1200 hours. Any time lost on a working day owing to weather conditions shall not count provided work is actually stopped or prevented thereby. see cl. 45, 46, 47	76 77 78 79
	(b)—At the first loading port the time for loading shall count (unless loading is commenced earlier) from 24 hours after Shippers have received the Master's written or telegraphic notice between 0900 hours and 1700 hours on ordinary working days and between 0900 hours and 1200 hours on Saturdays, that the Vessel has passed survey in accordance with Clause 10 and is ready to load at such berth as may be ordered by Shippers, whether in berth or not. Orders as to loading berth shall be given to the Vessel upon receipt of notice of her arrival in the port.	80 81 82 83 84
	Notice shall be given at the first port or place of loading only.	85
	If the loading berth is congested on Vessel's arrival at or off the first or sole port of loading or so near as she may be permitted to approach, the Vessel shall be entitled to give Notice of Readiness during ordinary office hours on arrival there, with the effect that laytime counts as if she were in berth and in all respects ready for loading provided that the Master warrants that she is in fact ready in all respects. Actual time occupied in moving from place of waiting to loading berth not to count as laytime. If after berthing the Vessel is found not to be ready in all respects to load, the actual time lost between the time of this discovery to the time that she is in fact ready to load shall not count as laytime.	86 87 88 89 90
	At the second or subsequent loading port (if any) the time for loading shall count (Sundays, holidays and Saturdays excepted) from 1200 hours of the day of arrival at the port or so near as she may be permitted to approach if the Vessel arrives before 1200 hours, and from 0900 hours of the following day if the Vessel arrives at or after 1200 hours, unless loading is commenced earlier, in which case the time shall count from commencement of loading.	91 92 93 94
	Time occupied in changing ports shall not count as loading time.	95
	If separations are required the cost of such separations shall be paid by the Charterers.	96
	The Shippers shall have the right of sending the cargo alongside continuously (Sundays and holidays excepted) and the Vessel shall be bound to proceed with the loading if so required. In such cases all additional stevedoring costs incurred as a result of working outside ordinary working hours shall be for Shippers' account. see cl. 45, 46, 47	97 98 99
Loading and Cancelling Dates	12—Time for loading shall not commence before the Vessel is not ready to load at all hatches at (first) loading port by 1200 hours of the day of arrival at the port or so near as she may be permitted to approach, which shall be declared upon notice of readiness being given, unless more time has been lost waiting for orders than mentioned in Clause 9, in which case the cancelling date shall be correspondingly extended. For the purpose of this Clause the preliminary 24 hours' notice of readiness to load, stipulated for in Clause 11, shall not be obligatory, and in no case shall the absence of a ready loading berth as per Clause 11 constitute a reason for cancelling this Charterparty.	100 101 102 103 104 105 106
Stevedores	13—Shippers shall appoint the Stevedores at their expense. Without prejudice to the other provisions of this Charterparty, in particular Clause 6, all other costs of loading, together with any incidental charges shall be borne by the Owners.	107 108
	The cargo shall be stowed under the supervision and direction of the Master.	109
Agents	14—At the port or ports of loading the Vessel shall be consigned to the Owners' agent.	110
	At the port or ports of discharge the Vessel shall be consigned to the Receiver's/Owners' agent at the customary fee. (*Delete as appropriate.)	111
Demurrage and Dispatch (Loading)	15—Should the cargo not be loaded within the time stipulated in Clause 11, demurrage shall be paid at the rate of 7500 USD per running day, and pro rata for any part of a day. Such demurrage shall be paid by the Shippers to the Owners day by day, when and where incurred.	112 113 114 115
	For all laytime saved at port or ports of loading dispatch money shall be due by the Owners to the Shippers on completion of loading and shall be paid on the first business day following completion of loading at the rate of one half of the above rate of demurrage.	116 117
Bill of Lading	16—Without prejudice to this Charterparty, the Master shall sign Bills of Lading for the cargo on the "Angotcramp" Bill of Lading form (freight and all terms, conditions, clauses, and exceptions as per this charter).	118 119
	Owners shall release signed Bills of Lading to Shippers immediately upon completion of loading and, if required by Shippers, at each load port.	120 121

Strikes and Civil Blockades	17—If the cargo cannot be loaded or discharged by reason of a strike or lock-out of any class of workmen essential to the berthing of the Vessel or to the loading or discharging of the cargo (which includes any stopwork meeting not included in the relevant Industrial Award or determination covering such workmen) or as a result of any blockade of the port arising other than as a result of war, any time lost by reason thereof shall not count during the continuance of such strike, lock-out, or blockade unless the Vessel is already on demurrage, but a strike, lock-out or blockade by the Shippers' or Receivers' men shall not prevent demurrage accruing if by the use of reasonable diligence they could have obtained other suitable labour. In the case of any delay by reason of the before mentioned causes, no claim for damages in respect thereof shall be made by the Shippers or the Receivers of the cargo, the Owners of the Vessel, or by any other party under this Charterparty. For the purpose of settling dispatch money accounts, any time lost by the Vessel through any of the above causes shall be counted as time used in loading, or discharging.	122 123 124 125 126 127 128 129 130
Time for Discharging	18— <del>Time for discharging shall commence (unless discharging is commenced earlier) twenty-four hours after Notice of Readiness has been given during ordinary office hours, whether in berth or not at the first or sole port of discharge and on arrival at the second port, if any, or so near as she may be permitted to approach. Cargo is to be discharged free of expense to the Vessel at the average rate of _____ tonnes per weather working day of twenty-four consecutive hours (Saturdays unless used, Sundays and holidays excepted) provided Vessel can deliver at this rate.</del>  If the discharging berth is congested on Vessel's arrival at or off the first or sole port of discharge or so near as she may be permitted to approach, the Vessel shall be entitled to give Notice of Readiness during ordinary office hours on arrival there, with the effect that laytime counts as if she were in berth and in all respects ready for discharging provided that the Master warrants that she is in fact ready in all respects. Actual time occupied in moving from place of waiting to discharging berth not to count as laytime. If after berthing the Vessel is found not to be ready in all respects to discharge, the actual time lost between the time of this discovery and the time that she is in fact ready to discharge shall not count as laytime.	131 132 133 134 135 136 137 138 139 140 141
Demurrage Dispatch (Discharging)	19—Should the Vessel not be discharged at the rate stipulated, demurrage shall be paid at the rate of <u>see cl. 15</u> per running day and pro rata for any part of a day.  For all laytime saved at port or ports of discharge dispatch money shall be paid at the rate of one-half of the above rate of demurrage.  Dispatch money, if any, at discharging port or ports shall be calculated on the basis of a weather working day of 24 consecutive hours but any time lost on a working day owing to weather conditions shall not count provided work is actually stopped or prevented.  Demurrage or dispatch, if any, at discharging port or ports shall be paid when and where incurred, and settlement to be made on completion of discharge.  Laytime at ports of loading and discharging to be non-reversible.	142 143 144 145 146 147 148 149 150
Lighterage at Port of Discharge	20—Any lighterage incurred to enable the Vessel to reach the place of discharge shall be at the risk and expense of the Receivers of the cargo, any custom of the port or place to the contrary notwithstanding, but time occupied in proceeding from the anchorage to the place of discharge shall not count.	151 152 153
Supervising Cargo	21—The Charterers, Shippers, Receivers or their respective agents shall have the right of being on board the Vessel whilst at loading port(s) and/or discharging port(s) for the purpose of inspecting the cargo, checking the weight(s), and supervising their interests.	154 155
Exceptions, etc.	22— <del>The provisions of Sections 5 and 8 of the Australian Sea Carriage of Goods Act, 1924, and of Articles III (except Clause 8 thereof), IV, VIII and IX of the Schedule thereto and any subsequent amendment thereto shall apply to this Charterparty and shall be deemed to be inserted in extenso herein. This Charterparty shall be deemed to be a contract for the carriage of goods by sea to which the said Sections and the said Articles apply and no regard shall be had to Article I of the said Schedule or to any subsequent amendment thereto. Nothing in this Clause shall be deemed to prejudice or limit Clauses 7, 17, 23, 24, 25, 28, 29, 30 and 31 hereof.</del>	156 157 158 159 160
Liberties	23—The Vessel shall also have liberty to sail without pilots, to call at any port or ports on the way for fuel, supplies, or any reasonable purpose, to tow and be towed, and to assist vessels in distress, all as part of the contract voyage.	161 162
War Risks Clauses	24—(A) If (i) the nation under whose flag the Vessel sails shall be at war whereby the free navigation of the Vessel is endangered;  Or (ii) the loading port shall, as a result of war or war-like operations be blockaded or export therefrom prohibited at any time prior to the cargo being shipped this Charter shall be null and void.  (B) No Bills of Lading to be signed for any blockaded port and if the port of discharge be declared blockaded after Bills of Lading have been signed, or if the port to which the Vessel has been ordered to discharge either on signing Bills of Lading or thereafter be one to which the Vessel is or shall be prohibited from going by the Government of the Nation under whose flag the Vessel sails or by any other Government, the Owner shall discharge the cargo at any other port covered by this Charterparty as ordered by the Charterers (provided such other port is not a blockaded or prohibited port as above mentioned) and shall be entitled to freight as if the Vessel had discharged at the port or ports of discharge to which she was originally ordered.  (C) The Vessel shall have liberty to comply with any orders or directions as to departure, arrival, routes, ports of call, stoppages, destination, delivery or otherwise howsoever given by the Government of the Nation under whose flag the Vessel sails or any department thereof, or by any other Government or any department thereof, or any person acting or purporting to act with the authority of such Government or of any department thereof, or by any committee or person having, under the terms of the War Risks Insurance on the Vessel, the right to give such orders or directions and if by reason of and in compliance with any such orders or directions anything is done or is not done, the same shall not be deemed a deviation, and delivery in accordance with such orders or directions shall be a fulfilment of the contract voyage and the freight shall be payable accordingly.	163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178
Prohibition	25—In case of prohibition of export or in case of any executive or legislative act done by or on behalf of the Government of the State, Country or Territory of export where the port or ports of shipment named in this Charterparty is/are situated, prohibiting export, any such prohibition shall be deemed by both parties to apply to this Charterparty and to the extent such prohibition prevents fulfilment of this Charterparty to that extent shall the provisions of this Charterparty be of no effect. Charterers shall advise Owners without delay of the reasons therefor and, if requested, shall provide proof to justify the cancellation thereof.	179 180 181 182 183
Sub-letting	26—No cargo other than that provided by Charterers shall be carried without Charterers' written consent, unless the Vessel is sublet. The Charterers shall have the right of sub-letting the whole or part of the Vessel, but shall remain responsible for the due fulfilment of the Charterparty.	184 185 186
Cesser Clause	27—The Owners shall have a lien on cargo for freight, deadfreight and demurrage (including damages for detention if any) at port or ports of discharge, and unless the Owners establish that the same cannot be effectively exercised for reasons beyond the Owners' control, the liability of the Charterers under this Charterparty shall cease, except as regards Clause 7 (viz. payment of freight) when the cargo is shipped (provided it is worth the freight, deadfreight and demurrage upon arrival at the port of discharge).	187 188 189 190
Bunkering	28—Before loading the Vessel shall have the right of proceeding to and bunkering at any usual bunkering port in Australia and/or bunkering at the loading port. After loading the Vessel shall have liberty as part of the contract voyage to bunker at the loading port and/or to proceed to any port or ports at which bunker oil is available for the purpose of bunkering at any stage of the voyage whatsoever and whether such ports are on or off the direct and/or customary route or routes between any of the ports of loading or discharge named in this Charterparty and may there take oil bunkers in any quantity in the discretion of Owners even to the full capacity of fuel tanks and deep tanks and any other compartment in which oil can be carried whether such amount is or is not required for the chartered voyage.	191 192 193 194 195 196
General Average and the New Jason Clause	29—General average shall be payable according to the York/Antwerp Rules, 1974 or any modification thereof for the time being in force, but where the adjustment is made in accordance with the law and practice of the United States of America, the following clause shall apply:	197 198

# NEW JASON CLAUSE

"In the event of accident, danger, damage or disaster before or after the commencement of the voyage, resulting from any cause whatsoever, whether due to negligence or not, for which, or for the consequence of which, the carrier is not responsible, by statute, contract or otherwise, the goods, shippers, consignees or owners of the goods shall contribute with the carrier in general average to the payment of any sacrifices, losses or expenses of a general average nature that may be made or incurred and shall pay salvage and special charges incurred in respect of the goods.

If a salving ship is owned or operated by the carrier, salvage shall be paid for as fully as if the said salving ship or ships belonged to strangers. Such deposit as the carrier or his agents may deem sufficient to cover the estimated contribution of the goods and any salvage and special charges thereon shall, if required, be made by the goods, shippers, consignees or owners of the goods to the carrier before delivery."

Both to Blame Collision Clause 30—If the liability for any collision in which the Vessel is involved while performing this Charterparty falls to be determined in accordance with the Laws of the United States of America, the following clause shall apply:

## BOTH TO BLAME COLLISION CLAUSE

"If the ship comes into collision with another ship as a result of the negligence of the other ship and any act, neglect or default of the master, mariner, pilot or the servants of the carrier in the navigation or in the management of the ship, the owners of the goods carried hereunder will indemnify the carrier against all loss or liability to the other or non-carrying ship or her owners in so far as such loss or liability represents loss of or damage to, or any claim whatsoever of the owners of said goods, paid or payable by the other or non-carrying ship or her owners to the owners of the said goods and set off, recouped or recovered by the other or non-carrying ship or her owners as part of their claim against the carrying ship or carrier.

The foregoing provisions shall also apply where the Owners, Operators or those in charge of any ship or ships or objects other than, or in addition to, the colliding ships or objects are at fault in respect to a collision or contact."

Oil Pollution Clause 31—The Owners agree to indemnify the Charterers, their agents, or any other party against any liability which may be imposed on them or which they may incur under any statute regarding liability for pollution of navigable waters by oil, by reason of any contravention of such statute by the Vessel, the Master or any servant or agent of the Owners provided that such contravention shall not have been caused or contributed to by the party seeking to be indemnified under this Charterparty and provided that the facts and matters giving rise to the contravention do not constitute a defence under Article 3 Section 2 of the International Convention on Civil Liability for Oil Pollution Damage 1969. The Owners' total aggregate liability in respect of any oil pollution incident shall under no circumstances exceed US Dollars 400,000,000 and the extent of the indemnity under this clause shall be limited to the difference between any liabilities, costs and expenses incurred directly by the Owners and US Dollars 400,000,000. The Owners warrant that the Vessel is entered in a P and I Association with cover for liabilities arising out of any contravention as aforesaid.

No liability for demurrage shall arise from any delay or loss of time to the Vessel at the port(s) of loading and/or discharge caused by any such contravention nor shall any time lost by any such contravention count when calculating despatch.

Nothing in this clause shall prejudice or deprive the Owners of their rights of limitation or exclusion of liability under any applicable or relevant law.

Commission 32—4.25 percent commission upon the freight and dead freight (if any) is due by the Owners to the Charterers on the completion of loading (at the last loading port if more than one) and shall be deducted from the freight payable under this Charterparty. If the Vessel is lost on passage between loading ports, then in lieu of the foregoing, 4.25 percent commission upon the freight on the Bill of Lading weight of the cargo already shipped shall be paid by the Owners to the Charterers on the basis aforesaid. see cl. 53

Arbitration 33(a) Any dispute arising under this Charterparty or any Bill of Lading issued hereunder arising from events which occur in Australia shall be settled by arbitration, at the Australian Centre for International Commercial Arbitration, Melbourne in the State of Victoria, Australia in accordance with the provisions of the Commercial Arbitration Act 1984 (Victoria) or any Statutory modification or re-enactment thereof for the time being in force. Each party may appoint an arbitrator. On the receipt by a party of the nomination in writing of the other party's arbitrator, that party shall appoint its arbitrator within fourteen days, failing which the decision of the single arbitrator appointed shall apply. In the event of the arbitrators not agreeing they shall appoint an umpire whose decision shall be final and binding.

This contract to be governed by English law.

(b) Any dispute arising under this Charterparty or any Bill of Lading issued hereunder other than provided for in paragraph (a) hereof shall be referred to arbitration in London, one arbitrator being appointed by each party, in accordance with the Arbitration Acts 1950 and 1979 or any Statutory modification or re-enactment thereof for the time being in force. On the receipt by a party of the nomination in writing of the other party's arbitrator, that party shall appoint its arbitrator within fourteen days, failing which the decision of the single arbitrator appointed shall apply. If arbitrators properly appointed shall not agree they shall appoint an umpire whose decision shall be final and binding.

(c) The arbitrators and umpire shall be commercial men normally engaged in the Shipping Industry. Any claim must be made in writing and the claimant's arbitrator appointed within six months of the Vessel's arrival at the final port of discharge, otherwise all claims shall be deemed to be waived.

Brokerage 34 percent brokerage is due upon shipment of cargo to

34 to 55

as attached hereto

It is understood that Clauses 1 to inclusive are incorporated in this Charterparty as far as applicable.

  
Signature (Owners)

  
Signature (Charterers)

# ADDITIONAL CLAUSES TO THE CONTRACT OF AFFREIGHTMENT

Dated on 3rd November 1993

35.

This contract of affreightment is for six (6) shipments of 55,000/60,000 metric tons, min/max, each, of wheat (semolina) in bulk ( exact quantities owner's option ).

36.

Tentative schedule lifting programme as follows:

1st cargo: 6th Januar / 12 Februar

2nd cargo: Februar / April

3rd cargo: April / June

4th cargo: June / July

5th cargo: September / October

6th cargo: 28 October / December

37.

For each cargo the charterer will nominate a five-day spread laycan, 22 (twenty- two) days before the commencement of such laycan. At least 20 (twenty ) days prior to the commencement of the laycan, the owners shall nominate the performing vessel or substitute, all the characteristics, ETA Fremantle and indication of the excepted tonnage to be lifted. This nomination is to be subject to the shipper's approval within 48 (forty- eight ) working hours.

38.

Tonnage to be nominated by owners to be geared (gearless, singledecker, selftrimming bulk carrier. In the owner's option the performing vessel to be max 20 years but for tonnage exceeding 15 years extra insurance , if any, due to

the vessel's age to be for owner's account.

The vessel to be guaranteed, suitable for grab discharge.

No cargo to be loaded on top of deep tanks, nor in bridge space, nor in any other place not accessible for discharge by means of mechanical grabs.

Should nevertheless, any cargo be loaded by vessel in places not accessible to grabs, any time lost and all extra expenses over and above, the cost of a normal grab discharge at port of destination to be for owner's account.

Deeptanks, tunnels and all other provisions within the vessel's holds are to be adequately protected against damage by stevedores failing which, owners to be responsible for all consequences. Charterers not to be responsible for any negligence, default or error of judgement of stevedoring employed, and claims for stevedores damage, if any, should be settled directly between stevedores and owners.

39.

Master shall telegraph shippers ( cable: Austwheat Fremantle ) and charterers ( Mind - Luanda ) on sailing from last port also 10, 7, 4, 3, 2 days and 24 hours prior to vessel's arrival at Fremantle central point, stating date of arrival.

On sailing from loading port, Master shall telegraph to owner's agent and charterers ( Manubito- Luanda ) stating bills of lading, quantity, date of same and ETA to Luanda, same to be confirmed by cable to 3, 2, days and 24 hours prior vessel's arrival at Luanda.

40.

The Master shall deliver to shippers duly signed bills of

loading , receipts or other shipping papers covering the cargo loaded into the vessel at port of loading as are presented to him for signature by the charterers or their contractors or agents without prejudice to the terms conditions and exceptions of this charter, prior to departure of vessel from Fremantle.

41.

Vessel will be loaded and discharge by shore or afloatng appliances and any reference to vessel's winches/derricks or winchment in this charter party to be considered null and void.

42.

Vessel nominated is to have clear and unobstructed holds, no centerline bulkhead and no woodsheating in any of the holds.

Vessel to be clean to receive wheat (semolina) on presentation at loading port.

43.

Any damages done in loading/discharging by shippers/receivers or their stevedores and consequences thereof to be settled directly between owners and shippers/receivers or their stevedores.

All vulnerable parts of the vessel to be sufficiently protected against damages occasioned by grabs failing which owners shall bear the consequences. Time used repairing vessel when preventing discharge not to count as laytime. If owners are unable to collect compensation for indisputed stevedore damage then the charterers to make their best efforts to assist owners in obtaining settlement.



44.

At the port of loading Austsea, ltd, shall act as vessel's agents for charterers and cargo interests only. Owners shall provide funds for all port expenses.

45.

Vessel to be loaded at the rate of 48000 metric tons per day of 24 consecutive hours ( weather working day ) Saturdays, Sundays, holidays included. Laytime at load port shall commence when vessel is in berth in turn , in every respect ready to load in free pratique and entered at Customs House Office, 6 hours after NOR has been given to charterers agents.

Such notice may be tendered after arrival during or outside office hours, Sundays and holidays included whether the vessel is in berth or not. If loading begins sooner, laytime shall count from actual commencement.

Time from 00,00 hours until 24.00 hours on January 1st, may 1st, DECEMBER 25 th is not to count unless used in which case actual time used to count. If loading is not completed within the period allowed, as provided above, Charterer will pay demurrage in usd 7500 per day and/or pro-rata.

Vessel is to pay despatch for all laytime saved at a rate equal to one half demurrage. At discharging port same rates to apply.

46

Time allowed for discharging purposes:

3600 metric tons per day of 8 consecutive hours ( weather working day ), Saturdays, Sundays and holidays included.

Time to be non-reversible.

Time for discharging to count from 08.00 hours a.m. of the following working day after the vessel is reported and in every respect ready, and in free pratique, whether in berth or not. Vessel to be reported during official office hours from Monday to Friday.

Official office hours to be considered from 09.00 hours to 12.30 hours and from 14.00 hours to 18.00 hours. In case charterers/receivers can arrange to discharge before time commences to count, Master to allow work to be done.

At discharging despatch money at half demurrage rate on working time saved.

47.

Overtime at loading and discharging to be for the account of the party ordering same, but if ordered by port authorities to be for charterer's account. Overtime for vessel's officers and crew to be always for owner's account.

48.

Master/Owners to comply with current regulations in Fremantle harbour.

49.

New Jason clause, both to blame collision clause and Chamber of Shipping UK war risk clauses are deemed to be incorporated in this Charter Party and to apply. US clause Paramount to be considered as part of this Charter Party and to be incorporated in all bills of lading issued under this Charter Party.

50.

Any taxes and/or dues assessed on cargo quantity and/or freight to be for charterer's account. Any taxes/dues on vessel to be for owner's account.

51.

Freight is to be paid at the rate of:

USD 30 / metric ton fiot

90% of freight payable before breaking bulk, balance plus demurrage less despatch, if any, upon completion of discharge and surrender of laytime statements for both ports.

Freight payable to:

account nr. 3030 46 512 Commercial Dutch Bank in favor of Messrs. Angotramp, limited.

52.

At Luanda's port, besides maximum draft, vessel not to exceed following dimensions:

air draft ( waterline to top hatchcoaming ): 20 metters during whole discharge. Beam: 32.20 metters

53.

In case of an increase in the bunker's price between two or more consecutive voyages, each dollar increased will be subject to the application of a multiplier which is fixed at 0.08 times the total quantity of cargo handled per shipment within the range 55000-60000 tons.

An invoice filled properly up will be sent in due time to charterers by the owners containning the value corresponding

to the result of the referred application for adjustment purpose.

54.

For each shipment a specific Charter Party will be drawn containing the terms and conditions of the present Contract of Affreightment.

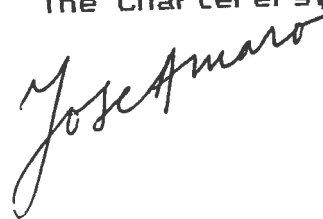
55.

An address commission of 2.50% is payable to Charterers plus 1.25% to Charterer's brokers and 1.25% to Shipbrokers ( if any ).

The Owners,

A handwritten signature in dark ink, appearing to be 'A. B. S.', written in a cursive style.

The Charterers,

A handwritten signature in dark ink, appearing to be 'Jose Amaro', written in a cursive style.

## CHAPTER SEVEN

### ECONOMIC CONCEPTS AND TECHNIQUES FOR A PROJECT EVALUATION

#### 7.1. The Revenue Statement at the end of year $n=1, \dots, 7$ .

As it is recognized, the revenue statement leads to a cash flow determination. The amount of cash flow will vary according to the freight level along the business period as a result of increases in the costs.

In other words, the amount of cash flow as future money which is supposed to be collected at the end of the business year will be affected either by the inflation or by additional investments made along the business period by the company.

For purpose of this project, as the freight will be earned in American dollars rather than in Kwanzas ( Angolan currency ) due to the constant devaluations of the latter, it will be assumed here, an American dollar's inflation rate of two (2) percent per year which is from the author's point of view, perfectly reasonable considering the relative stability of the American dollar vis-a-vis other currencies.

Therefore, a constant freight rate along the project is assumed with adjustments resulting from the increase in the fuel prices, ignoring in this way, increases in the running fixed costs as this is a matter of good shipowning management. That is to say that the charterer does not care about the current level of fixed costs as it must be an incentive for the shipowner to lower his costs down through effective management.

Regarding diesel costs, the author assumes they are constant over the project for practical reasons due to the fact that the shipowner is more concerned about the changes in the price of fuel which is rather costly.

Moreover, diesel consumption is not so high compared to that of fuel. This fact reinforces the author's assumption. However, in practice the shipowner would take diesel costs into consideration as they affect the total costs somewhat.

Going back to the dollar inflation, it is understood as being the loss of the real value of the dollar instead of its nominal value. Assuming that Angotramp's supplier is located in the Netherlands so that it has to import spare parts or services from him. In the meantime the dollar loses its parity from 1USD=2 Dutch guilder to 1USD=1.96 Dutch guilder.

It can be seen from that example, that the dollar did not lose its nominal value but its real value instead, taking into account that the price of goods and services imported once quoted in dollars will cost two percent more expensive than before.

This is in the author's opinion the meaning of the dollar inflation which will lead the spirit of this project.

Regarding possible increases in the port costs, they will not be taken into account assuming that they are constants along the project.

Furthermore, it has been stated that the first reclassification, since the vessel was built, took place in September 1991. The last drydocking took place in November

1993 prior to the delivery of the vessel.

Furthermore, it is Angotramp's policy that drydocking takes place every three years. The bill to be paid for drydocking is assumed to be 300,000 usd while for reclassification is about 500,000 usd.

Finally, it is assumed there is no tax on incomes. Regarding tonnage tax on the vessel, Marisol, it is payable to the Angolan State and has been included with operating expenses.

#### Revenue Statement at the end of year 1

Number of shipments: 6

Freight market's restriction: 28 usd/ton

Freight:	30
Cargo	330000 (from 55000x6)
Fuel adjust.	0
Revenue	9900000 (from 330000x30)
Oper. expenses	2449000
Depreciation	1343750
Interest	1935000
Cap. repayments	3071429
Tot. cap. costs	6350179
Tot. port costs	270000 (from 45000x6)
Bunkers	925824
Net profit	(95003) (from rev.-tot. costs)
Depreciation	1343750
Cash Flow	1248747 (from profit.+deprec.)

	Year 2	Year 3
Freight	30	30
Cargo	330000	330000
Fuel adjustment	8800	18040
Revenue	9908800	9918040
Operating expenses	2497980	3047939.6
Capital costs	6350179	6350179
Port costs	270000	270000
Bunkers	934624	952664
Net profit	(143983)	(702742.6)
Depreciation	1343750	1343750
Cash Flow	1199767	641007.4

	Year 4	Year 5
Freight	30	30
Cargo	330000	330000
Fuel adjustments	27280	36520
Revenue	9927280	9936520
Operating expenses	2598898	2650876.4
Capital costs	6350179	6350179
Port costs	270000	270000
Bunkers	979944	1016464
Net profit	(271741)	(350999.4)
Depreciation	1343750	1343750
Cash Flow	1072008	992750.6



	Year 6	Year 7
Freight	30	30
Cargo	330000	330000
Fuel adjustments	46200	55880
Revenue	9946200	9955880
Operating expenses	3003894	2757972
Capital costs	6350179	6350179
Port costs	270000	270000
Bunkers	1062664	1118544
Net profit	(740537)	(540815)
Depreciation	1343750	1343750
Cash flow	603213	802935

Bunker adjustments except diesel, have been calculated for every year as follows:

Increases in fuel at 2 percent per year:

year 1= 101.7  
 " 2= 103.7  
 " 3= 105.8  
 " 4= 107.9  
 " 5= 110  
 " 6= 112.2  
 " 7= 114.4

By applying the multiplier (0.08) agreed in the Contract of Affreightment the following amount is obtained for fuel adjustment purposes every year:

year 1: no increase

year 2:  $55000 \times 0.08 \times (103.7 - 101.7) = 8800$  USD

year 3:  $55000 \times 0.08 \times (105.8 - 101.7) = 18040$  USD

year 4:  $55000 \times 0.08 \times (107.9 - 101.7) = 27280$  USD

year 5:  $55000 \times 0.08 \times (110 - 101.7) = 36520$  USD

year 6:  $55000 \times 0.08 \times (112.2 - 101.7) = 46200$  USD

year 7:  $55000 \times 0.08 \times (114.4 - 101.7) = 55880$  USD

Moreover, it is stated in the revenue statement that net profit or net revenue is negative for every year which means that the project is only to a certain extent self-supporting owing to the inclusion of depreciation. Thus, it may be concluded that in a project it does not matter if the net revenue is negative but the amount which flows in cash matters. This is the cash flow which results from the addition of depreciation to net revenue.

Furthermore, depreciation as a cost is just a concept since it increases the liquid assets. That is the reason why it must be added again to net profit whether positive or not.

It can also be seen how the cash flow for the years 3 and 4 are relatively lower than the others. This is attributable to the additional investments that have been made in vessel reclassification and drydocking, respectively.

Although all cash flows along the project are positive this does not mean that it is profitable. The justification of the previous statement will be given by calculating net present value and internal rate of return which will, thus, have the last word regarding acceptance or rejection of the referred project.

As a matter of fact, the net working capital for the year 2, 3, 4, ... , 7, is not enough to fulfill the company's obligations more than two months. This can be proven if one divides the total revenue of the previous year by twelve months and the result of this is divided in turn, by the amount of cash flow. For instance, the cash flow at the end of year 1:

gross revenue per month:  $9900000:12=825000$  usd  
cash flow:  $1248747:825000=1.5$  months

From the above , it can be stated that the net working capital covers only one month and a half, showing the need the company has for borrowing money to keep on feeding business activities for the rest 10.5 months.

## 7.2. Calculation of Net Present Value

The purpose here is to compare the investment cost or the cost of the vessel with the cumulative surpluses which represent the difference between benefits and costs for each year, discounted at a specified rate. If the cumulative

discounted surpluses are higher than the investment amount, the investment is profitable at the specified rate.

Picking up the yearly cash flows from the revenue statement, one must convert them into the present through a discount factor:

discount factor (i) = 9%

year 0 = -21500000 ( the value of the vessel ).

year 1 =  $1248747 \times 1 / (1 + 0.09)^{**1}$  = 1145600.498

year 2 =  $1199767 \times 0.8416$  = 1009723.907

year 3 =  $641007.4 \times 0.7721$  = 494921.813

year 4 =  $1072008.6 \times 0.7083$  = 759303.691

year 5 =  $992750.6 \times 0.6498$  = 645089.339

year 6 =  $603213 \times 0.5961$  = 359575.269

year 7 =  $802935 \times 0.5469$  = 439125.151

present value = 4853339.668

less original investment = 21500000

net present value = (16646660.33)

It can be seen from the above example that the net present value is less than zero which means that the investment does not even break even. This fact can be explained by the negative net profit along the project which could not even cover the annual costs. This leads to the conclusion that the freight level is not sufficient to pay the investment so that it must be raised through additional negotiations with the charterer.

The optimum freight level will be the one where the net present value will be zero. This means where the total costs of the investment equal the initial investment.

Furthermore, it can be stated in the same example how present values are getting smaller and smaller in the subsequent years. This can be explained by the following statement:

" The further away the payment date and the higher the rate of interest, the smaller the present value of a given sum payable in the future ". ( Richard G. Lipsey, 1989, 7th edition in " An Introduction to Positive Economics", page 324)

### 7.3. Calculation of the Internal Rate of Return

The internal rate of return of a project is the discount rate which equals the net present value of an opportunity of investment to zero. Thus, the IRR of the project is calculated as follows:

The discount rate (9%) of the project, from calculations for the net present value is increased or decreased as the case may be, until the summation of the discounted cash flows equals the amount of the initial investment. In the case of this project, the discount rate should be decreased. However, it is not difficult to find that, by doing that operation, the internal rate of return is somewhere below the discount rate, which means that it is negative.

The lower the discount rate the higher the net present value.

Thus, by lowering it, a negative rate will be found which enables one to say that IRR is less than the discount rate or interest rate.

The IRR means that " due to the fact that the social rate (interest rate fixed by the government) is lower than those ones fixed by other financial institutions which is done purposely in order to increase the capital in stock of the companies, stimulating in this way the investment, the investors expect a higher rate as a return on their investment.

That is the reason why the discount rate must be below the internal rate of return..." ( Prof. Dr. Hercules Haralambides in lectures on "Investment Appraisal", World Maritime University, 1993 ).

As a matter of example, if the IRR was equal to the discount rate of the investment, this fact would mean that there is no return for the company's investors on their investment at all, because at that point the investment would cover only the costs.

Consequently, the investors of the Angotramp Ltd do not expect any return on their investment once the IRR is lower than the interest rate which represents the price of the bank loan they had to pay for.

## CHAPTER EIGHT

### RISK MANAGEMENT

#### 8.1. General

Risk accompagnies man's activities and decisions. It is everywhere and can neither be avoided nor eliminated but only minimized. The correct adoption of measures and strategies in a due time towards minimization or reduction of risk could be defined as risk management.

" It is a world of change in which we live, a world of uncertainty. We live only by knowing something about the future; while the problems of life or of conduct at least arise from the fact that we know so little. This is a true of business as of the others spheres of activity ".

(Prof. Frank H. Knight, Boston, 1921, "risk, uncertainty and profit" Massachusset Houghton Mufflin Co.).

Moreover, Robert I. Mehr & Bob A. Hedges, say in their book: ( Risk Management in the Business Enterprise", Homewood , Illinois, Irwin 1963 ), that:

" Businessmen face two kinds of risk: dynamic and static . Dynamic risks, often called speculative risks arise from unexpected changes in economic productivity of a given capital investment. They arise from market, management and political sources and are ambivalent in nature: they can result in a profit as well as loss. Static risks, often



called pure risks, arise independently of the movements in the economy ".

Regarding that latter statement, it is clear that the two kinds of risks apply to a shipowner. How he can manage them will be subject to analysis in this chapter further ahead.

## 8.2. Risk Sensitivity Analysis

Risk sensitivity analysis consists of using adequate methods to see how sensitive the project is if any of its variables are changed due to influence of external and/or internal factors on it.

The aim of risk sensitivity analysis is to determine the variable which gives the optimum result to the project. By optimum result it is either the minimum acceptable freight rate level or quantity of cargo which lead the revenue statement of a project of investment to a break-even-point, i.e. where revenues equal costs.

As far as the methods are concerned, there are three: simulation, probabilistic and statistic method. Here and for the purpose of this project the author will work out the simulation method which consists of changes of variables until the optimum level is reached.

Thus, picking up from the revenue statement for the year one, as an example it looks like as follows:

year 1	Alternative 1	Alternative 2
nr. of shipments	6	6
freight rate	30	30.29
cargo	55000	55000
freight adjustments	0	0
revenue	9900000	9995700
operating expenses	2449000	
depreciation	1343750	
interest	1935000	
capital repayment	3071429	
total cap. costs	6350179	
port costs	270000	
bunkers	925824	
total costs		9995003
net profit	(95003)	697

### Alternative 3

nr. of shipments	6
freight rate	30
cargo	55528
freight adjustments	0
revenue	9995040
total costs	9995003
net profit	37

In the alternative 1, the freight rate agreed in the contract of 30 USD dollars gives a negative profit to the shipowner Angotramp Ltd. To improve the result, he must opt either to negotiate an increase of the freight and leave cargo quantity constant ( alternative 2 ), or asking for more cargo and leave the freight rate as it was ( alternative 3 ).

Therefore, the optimum freight rate will be the worst possible without incurring losses; the same as the cargo.

Thus, the freight rate of 30.29 US dollars will be the minimum acceptable for the shipowner by maintaining the cargo quantity while the minimum acceptable cargo quantity will be 55,528 tons by keeping the freight rate agreed in the contract.

A level below 30.29 US dollars and 55,528 tons will be risky for the shipowner. However, this again, does not mean that the investment for a seven- year period will be profitable by doing the aforesaid risk analysis because of the unpredictability of the events which may occur further ahead.

This example of risk analysis serves an immediate purpose, for example a single voyage is performed in a relatively short time which minimizes the degree of risk and uncertainty.

Therefore, in that case the shipowner can rely more on his risk sensitivity analysis.

Another view of this issue is also using several discounting rates. This latter procedure of analysing risk sensitivity suits long term purposes. Angotramp's project is an example of this. The referred procedure serves long term projects because it takes into account the time value of money as long as there is a discount factor. Moreover, a risk premium for the project can be advanced by the shipowner and taken into account when discounting.

Thus, using several discount rates the shipowner should opt for the one which makes the net present value equal to zero. In other words, at the beginning of the project the shipowner is capable by doing so, to determine the optimum ( maximum ) interest rate he will negotiate with the bank at which he will be able to cover at least his fixed and variable costs.

Optimum ( maximum ), interest rate was mentioned because if the shipowner succeeds in getting a lower interest rate from the bank, he may expect to cover all costs including

capital costs and in addition getting a net return on the investment.

## CHAPTER NINE

### CONCLUSIONS AND RECOMENDATIONS

The conclusions of this study could be done by considering two moments:

The first moment is where the shipowner having identified all investment opportunities has not carried out an investment appraisal on the project.

The second one is where same shipowner after identifying investment opportunities, has done it.

This study is concerned with the first one.

It can be stated from this study that managers of the Angotramp Ltd, after having studied the market carefully and made freight calculations, they decided to buy the Marisol asking for a bank loan offering as a security the same vessel to the bank's financier.

Freight calculations have been made comprising fixed running costs, capital costs and variable costs. The managers were able then to assess the break-even-freight. With this in mind, they thought once all costs were covered capital costs in particular, Angotramp's managers were therefore able to commit themselves to a bank loan and secure a contract of afreightment with a first class charterer at a rate of 5% above the break-even-freight.

Doing that, they believed there would not be any risks at all and that the investment would be recouped within seven years, considering that all costs had been covered. To help

that belief, is the revenue statement for every year beeing positive due to the addition of the depreciation to the negative profit. However, this latter was just an illusion as it could be seen later when calculating the net present value and internal rate of return.

Moreover, the cash flow of a given year is tied-up money, which is not supposed to be transferred to the incoming years , since every year represents one project apart.

To be more objective, the referred managers have just limited their cost-benefit analysis to a simple break-even-freight and revenue statement calculations.

The net present value as an absolute measure to quantify the profitability of the same project has been ignored; the same happening to the internal rate of return which would give an indication about the quality of the project.

In other words, if the investment appraisal has been carried out taking into account net present value and internal rate of return, many things could be avoided such as :

- 1) The financial commitment to the bank for purchasing the Marisol .
- 2) As a result of the above, a contract of affreightment would not be signed.

Restating, investment appraisal in its part dealing with risk analysis enables the company to anticipate measures with a view to eliminating to a certain extent risks rather than

incur unnecessary losses.

Using investment appraisal by applying correct techniques and methods of a project's evaluation, the decision makers are fully aware of the rate of return they expect on their investment.

This is provided by the internal rate of return techniques.

Furthermore, investment appraisal is the only way which enables all decision makers to judge positively or negatively with a certain degree of authority about any given investment project whether a large or a small one.

Finally, the Author recommends to all managers especially those working for Angonave-Holding, to carry out an accurate investment appraisal before deciding to invest on a project, whatever it can be, so that many risks can be avoided on the one hand and to find on it a reliable tool of project's forecast on the other hand.

Furthermore, the use of risk sensitivity analysis appears to be wise since it helps identifying the weaknesses of the project, providing therefore, with multiple alternatives of negotiating a sound freight rate to the managers.



terms, a single voyage charter party attached documents to legitimate the referred contract: inclusion, the parties involved in a C.O.A. need

ons.  
d in C.O.A. which is fully governed by its terms  
er, the charter party initially issued is  
ge charter party.

nomination which in this regard is deemed to be a  
er a new voyage is to be performed to issue a  
both parties to the C.O.A. for the entire period  
it is much easier to sign a charter party which  
is for both parties to come up with a new charter  
t would be laborious on the performance of the  
a single voyage charter party for the incoming  
tter of nomination results as a consequence of no  
ty and a letter of nomination are not attached  
affreightment is meaningless if a single voyage  
be stated from the above that a standard form

Affreightment and Hybrid Contracts", page 5).  
Gorton and Rolf Ihre, 1990, 2nd edition, "

when a charterer and an owner negotiate a C.O.A.  
rms intercoa 80 and volcoa are useful mainly as  
e tailor-made for the specific situation, the  
ter party. As most of contracts of affreightment  
contract intended to be used in combination with a  
ion of bulk dry cargoes. Also the volcoa is a  
lcoa is issued by Bimco and is designed mainly for  
products.  
0 is designed especially for the carriage of